

DVR Server

(B/S Structure)

User manual

2005-12

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Chapter 1: Introduction to System Functions

Digital Video Surveillance System is specially designed for banks, postal services, convenient stores, warehouses, retail stores etc. This enhanced system is capable of monitoring up to 16 channels simultaneously in real time with superior video and 2 way audio quality. The recorded video clips are compressed into standard MPEG-4 or MPEG-1 (depend on hardwares used) format and stored into computer hard disks. Unlike conventional tape system, the digital system allows users to search for recorded video clips instantly by specific date or time. While the snapshots are saved in BMP format. The system will still be performing single channel or multi channels recording during playbacks.

1. System Specifications:

1.1 Input, Output and Controls

- Fully customizable e-map, customers can customized their own e-map layouts;
- The system can be linked to preset police stations through inputs and outputs. Modem is required to use this function.
- Fully support four different kinds of recording : continuous recording, schedule recording, motion detect recording, and
- For privacy reason, Mosaic function is applicable during monitoring or recording.
- Support multi hard disks and multi partitions. Capable of automatic recycling when the hard disks are full. For SCSI hard disks, system will automatically shut down when the hard disks are overheat.
- For security reason, different users could be assigned different access levels by system administrator.
- This system uses only approximate 5% of the CPU usage under most circumstances. This will ensure the stability of the program.
- Many image manifestation, supporting 1,4,9,12,16,20,24,25,30,36 channel video and audio synchronous manifestation,the size: CIF:352*288, QCIF:352*240, HD1:704*288, D1:704 x576s;The audio adopts the kind

rate:44.1KHZ

- The system supports up to 64 channels, the rate of the each channel picture is a 30 per second(NTSC), video and audio is synchronous;
- The file cuts over to lose contents as 1-2 frames, the far and smaller nation rules;(0.5 second, roughly 12)
- Motion detect prepares to record 5 second, postpone record to 5 second, good enough to record whole records process;
- Hard disk capacity:(include audio)MPEG-1:220MB/hour/channel;MPEG-4:60-180MB/hour/channel, general circumstance is:100/hour/channel, the hard disk capacity(compress the rate namely). It can be adjusted according to customers needs.
- Support the picture protection function, support two kinds of methods :
1.Writing with the special code to record file(namely watermark function); 2. using hardware to write the date onto the picture, supporting hardwares needed to use this function.
- Recording, monitoring, monitoring through network and playback can work at the same time;
- Built in WatchDog function (Additional hardware required). System is capable of diagnostic problems automatically and prevents system from hackers.
- Built in Http Web Server function, support browsing through IE browser.
- Support converting Dynamic IP to static IP.

1.2 Playback

- The recorded video clips are compressed into MPEG-1 or MPEG-4 format files and stored into hard disks. The video clips can also be burned into CD or DVD with the built in burning software. A special software is required to view the playbacks.
- Users are allowed to capture images during playbacks. Captured images will be stored into a file and could be zoomed or watermarked.
- Different ways to playback video clips : Normal speed, Frame by frame, Fast motion, Slow motion, Single channel or Multi channels.
- Each channel supports audio playbacks.
- Users could playback the video clips from the beginning or by certain time

segments

1.3 Real Time Monitor through Network

- The system provides 3 kinds of communication protocols : UDP, TCP, the Multicast, they all support different kinds of networks.
- Support LAN and WAN real time monitoring. Rate: 1--30f/s, picture standard:352*288;
- Support broadband internet network monitoring (using TCP protocol method)
- The playback bandwidth is default at 192~512 Kbps. It depends on the recording bandwidth.

1.4 Playback through Network

- The system connects the host by TCP protocol and download index files from host, then playback as same as local playback.
- Playback in different methods : Normal, frame by frame, fast motion, slow motion, single channel, multi-channels.

1.5 Video compress card

- The system uses COM technology to support different cards. This will allow users to do their own upgrade easier. The system support H.264 and MPEG-4 cards.

1.6 Outside part

- The system has supported several a cards(Moxia...), with convenient customer to the request of every kind of different equipments communication
- The system can connect into the any PTZ
- The system can connect into any alarm controller, the different function reports to the police the controller may affect some functions of the system;

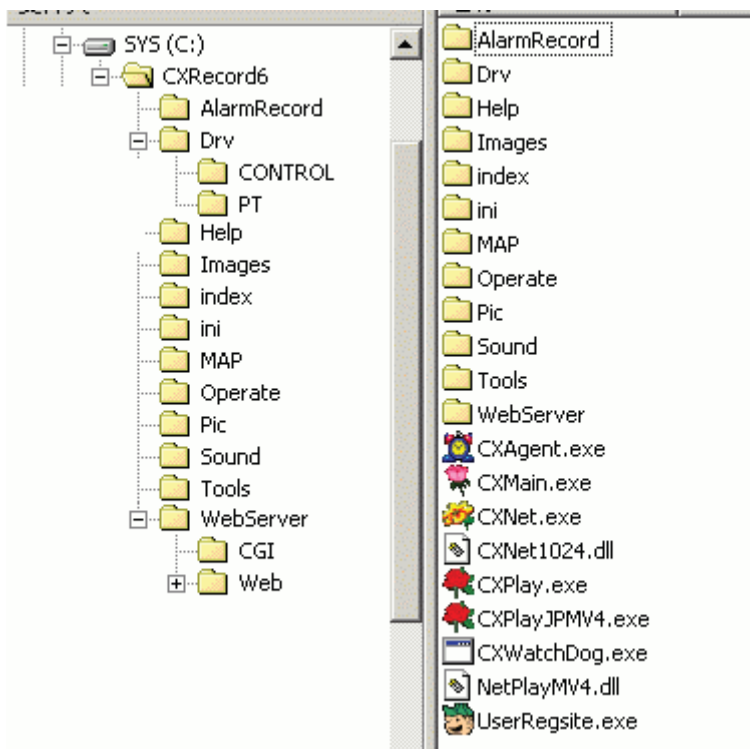
Software environment

I. OS environment

1. It works on Windows 2000 or Windows XP Professional. SP2(recommended).
But it needs the hardware driver to support.
2. It works with DirectX 8.0 or higher.

II. The folder structure

After installed, the folder will be shown as follow:



Each function will be explained in details on different chapter.

III. How the program starts to operate

1. After the system is installed, It runs the program: CXAgen.exe automatically when the computer reboots. If you do not want the program runs automatically, do the following:
 1. Input "regedit" in "run" text box from the start menu of OS, then click "OK";
 2. Look for
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersio
 3. Delete the key: "CXAGENT" from right list.
4. Run the file: CXMain.exe to enter the main window.

Hardware environment

I. Requirements:

1. CPU : PIII 730 above(or CIII 1G above).It is recommended to use P4.
2. Memory:128M and above. Use 256M memory with more than 12 channel video and use net function.
3. Mainboard : Since the video compress works closely with motherboard. It is recommended to use Intel chipset than any other chipset.
4. Video Card : It must support the Overlay function, recommends to use 32 MB and above. The video card decides the image quality. It is recommended to use nVidia or ATI video card.
5. Sound card : Any windows supported card will work fine.
6. Hard disk : Any IDE hard disks will work fine. The speed requires is 7200 rpm.
7. Please refer to 'Hardware installation' for further assistance.

II. Hardwares compatibility

1. The system supports multi-communication port card(such as Moxia...),so you can connect with different equipment
2. Support different kinds of PTZ cameras. All you need is the protocol number to connect to the hardware.
3. Support different alarm equipments.

Shortcut key and system password

| Shortcut key | Function |
|--------------|---|
| F1 | Open the help file |
| F2 | Snap image |
| F3 | Show the images of snapping and edit them |
| F4 | Login with other user name |
| F12 | Lock the system,it wants to unlock if you click any button. |

After you install the system.the default user name is:system,the default password is:system

Hardware installation

I.Setup sequence

Do this after finish installing computer and OS(don't include drivers)

1. Install video compress card
2. Install drivers of the mainboard(include: schip driver(such as 845D schip),disk driver(such as ATA100))
3. Install the driver of video compress card
4. Install the driver of display adapter
5. install other drivers
6. Install DirectX 8.0 or high version
7. Install other equipment,such as PTZ,alarm control...

Please install other equipment with its specialty.

If you disrupt the above setup sequence, the system may incapability the normal setup succeed.

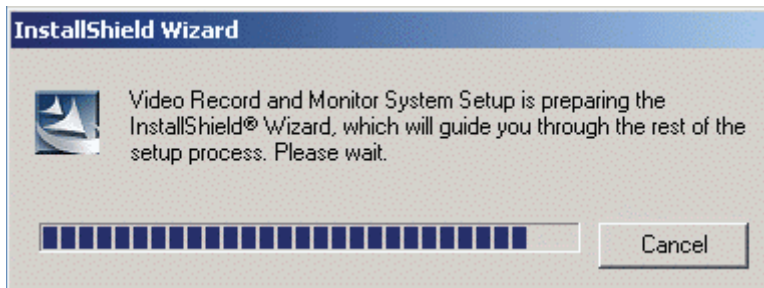
II.Note

1. Since there maybe more than one hard disk will be installed, there might be sufficient heat generated inside the case. So, it is recommended to install a heat sink or install a big fan in front of the AC adapter.
2. If the computer overheat, the program will not work correctly. It is recommended to shut down the computer and let it cool off.

Software installation

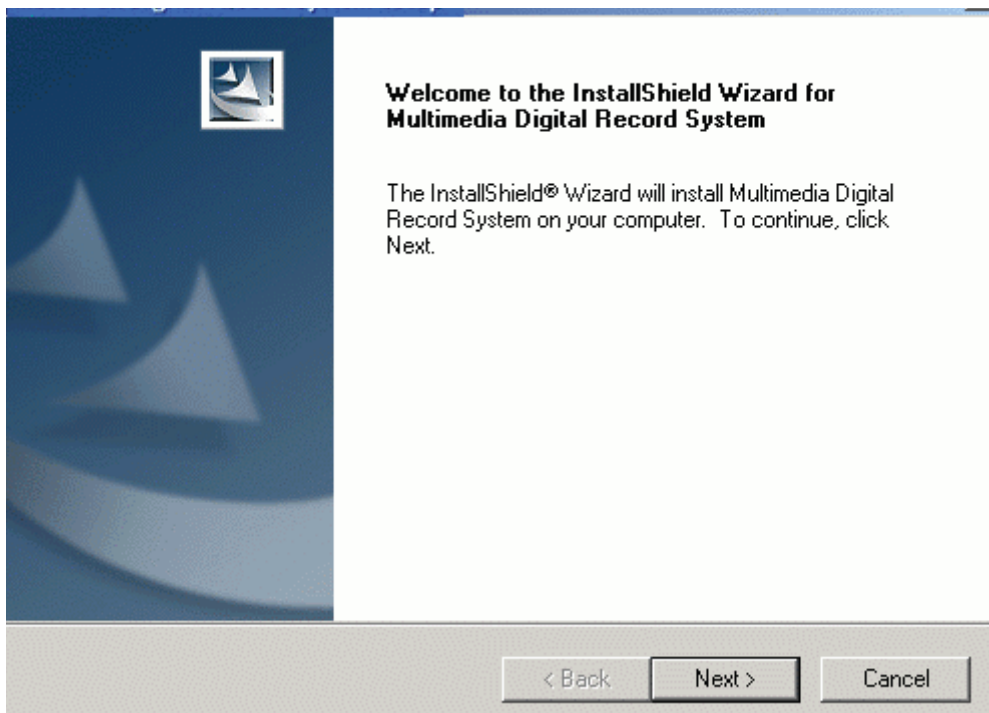
ii

1. Run Setup.exe on the folder '°setup'± to install.



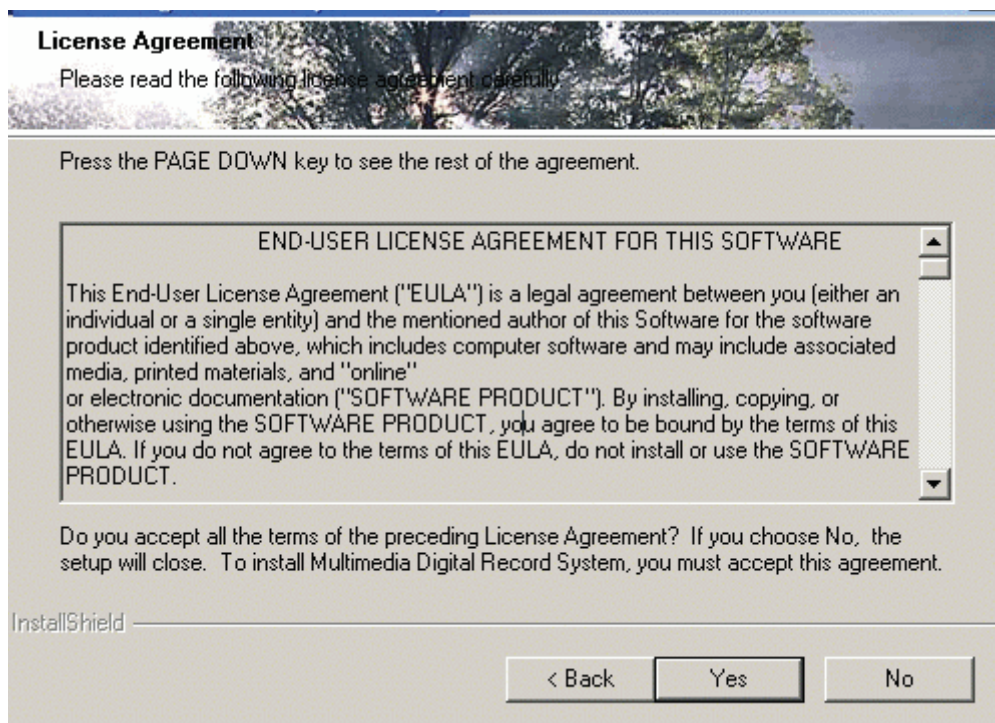
ii

2. A "Welcome" window will pop up



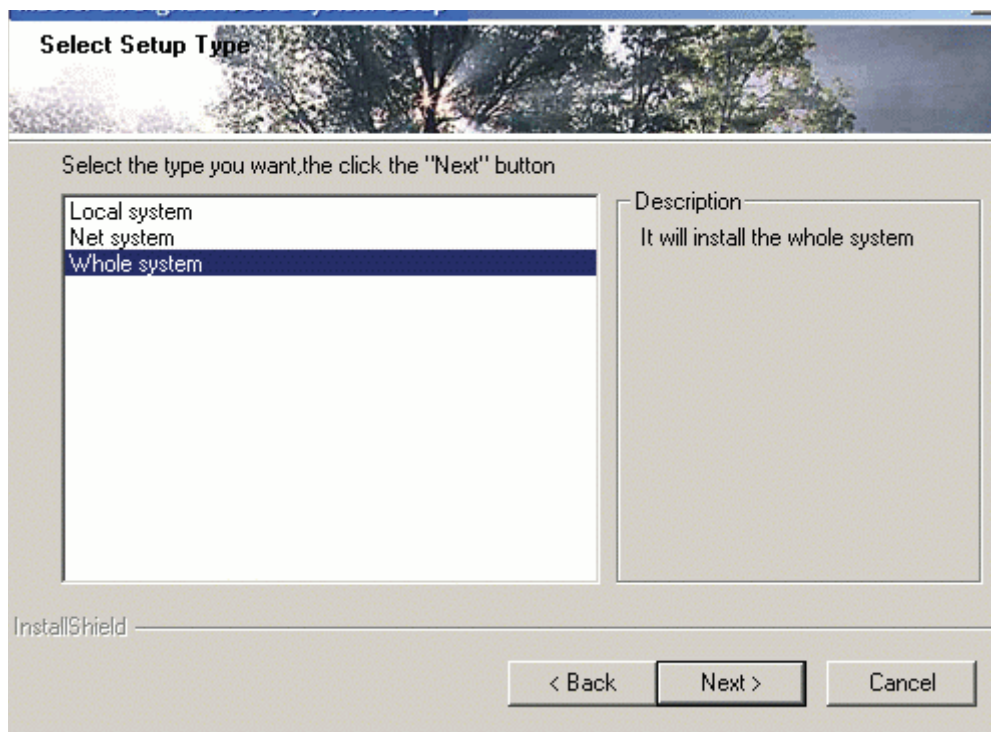
ii

3. Then the License Agreement" window will pop up. Click Yes to agree.



ii

4. Select setup type, as shown below:

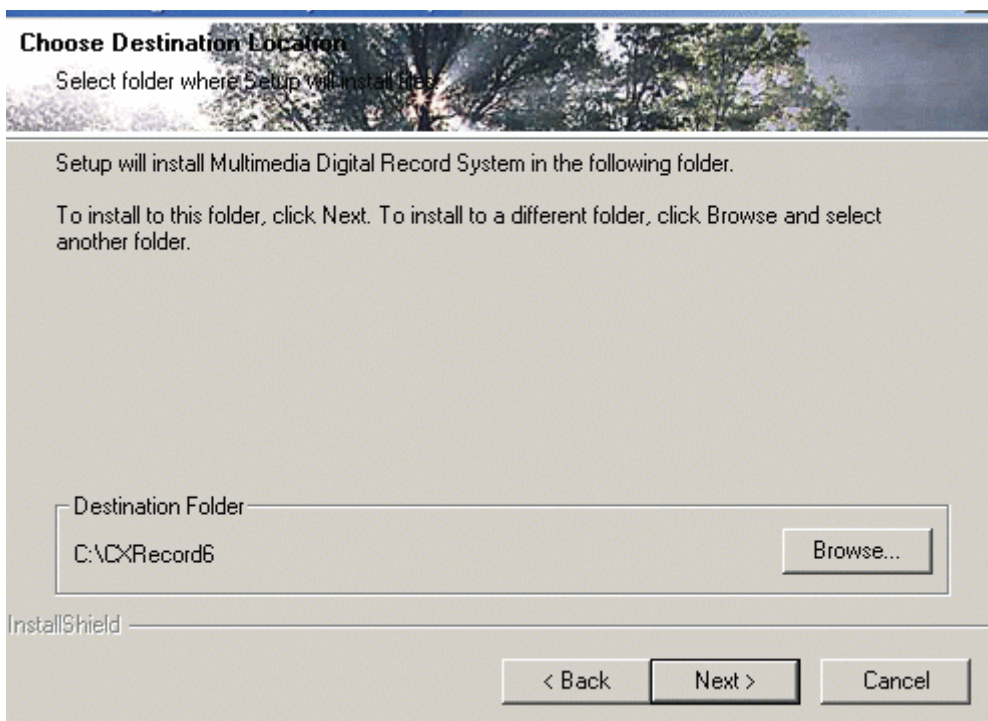


There are three options to install:

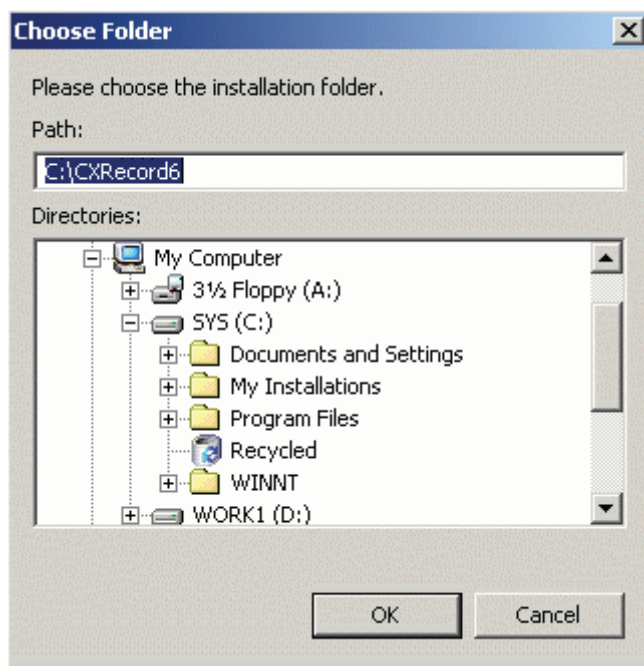
- a. Local system: It will only installs host software.
- b. Whole system: It will install host and network software.
- c. Net software: It will only installs network software.

ii

5. Then select the path, the system default folder is: C:\CXRecord6

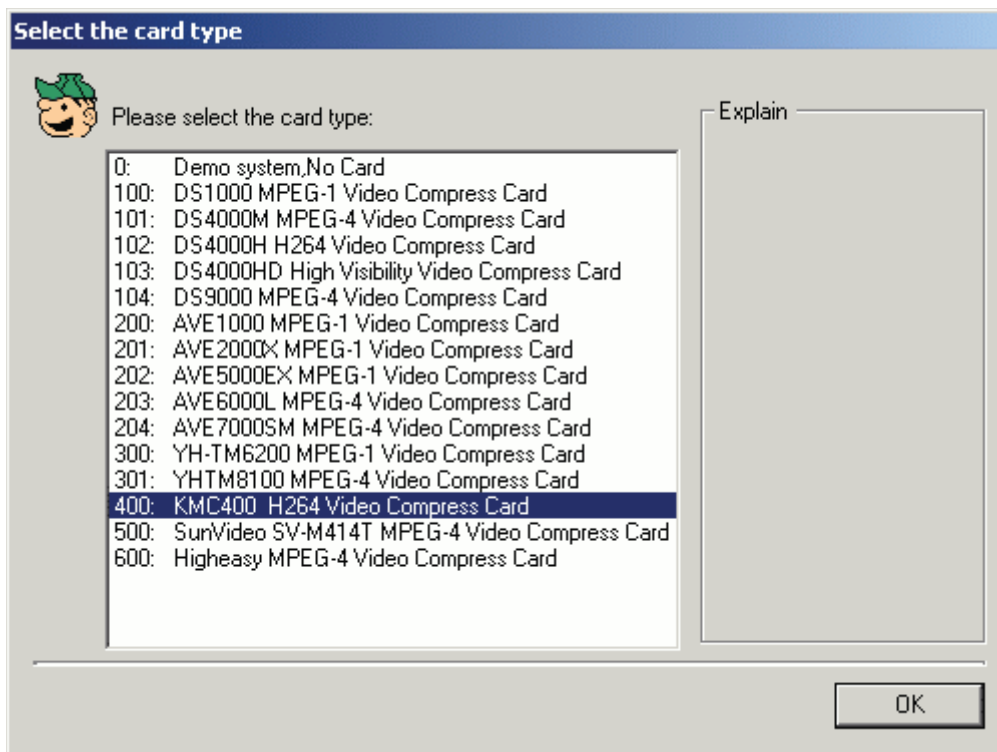


Browse for different folder to install



ii

6. Select Card Type.




ii

7. After selecting the card , then select the registration type , there have totally three options to register.

You can skip this step and register later by using UserRegsite.exe.

7.1 Hard lock. Serial number is printed on hard lock.

User registration, this program don't check the number



Registration type:

☒ Hard lock

☐ Hard Disk Serial numbe

☐ Card Serial Number

You must provide information:
1.How much video channel?

User information

The number in the hard lock:

| | |
|------------|------------|
| 1234567890 | CELXTA0001 |
|------------|------------|

Please fill in the table with the number in the hard lock!


If you are probation, please click 'CANCEL'!

OK CANCEL

Hard lock is inserted into LPT or USB port. When the system is running, it can't be moved out. If it can't find the hard lock, the computer will reboot.

7.2 Hard disk serial number. The user ID is a number of hard disk.

User registration, this program don't check the number



Registration type:

☐ Hard lock

☒ Hard Disk Serial numbe

☐ Card Serial Number

You must provide information:
1. How much video channel?

User information

Disk ID: C6E8DA9E5

User serial:

| | | | |
|--------|--------|--------|--------|
| 123456 | 789012 | 345678 | 901234 |
|--------|--------|--------|--------|


Please get the serial number from provider by the 'User ID'. As the number is singleness in all computer, so you only registe succeed in this computer!

If you are probation, please click 'CANCEL'!

OK CANCEL

7.3 Video compress card serial number, as follows graph:

User registration, this program don't check the number



Registration type:

☐ Hard lock

☐ Hard Disk Serial numbe

☒ Card Serial Number

You must provide information:
1. How much video channel?

User information

Card Serial:
KMH4000A1234567

User Serial:
123456 - 789012 - 345678 - 901234

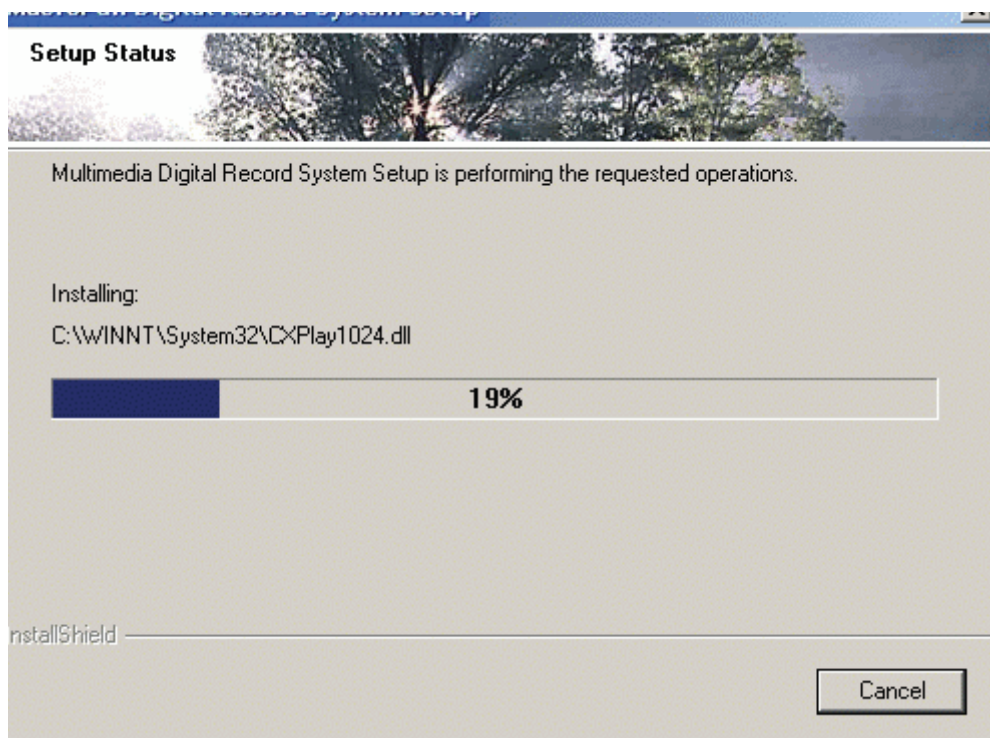
Delete Previous Next

If you are probation, please click 'CANCEL'!

OK CANCEL

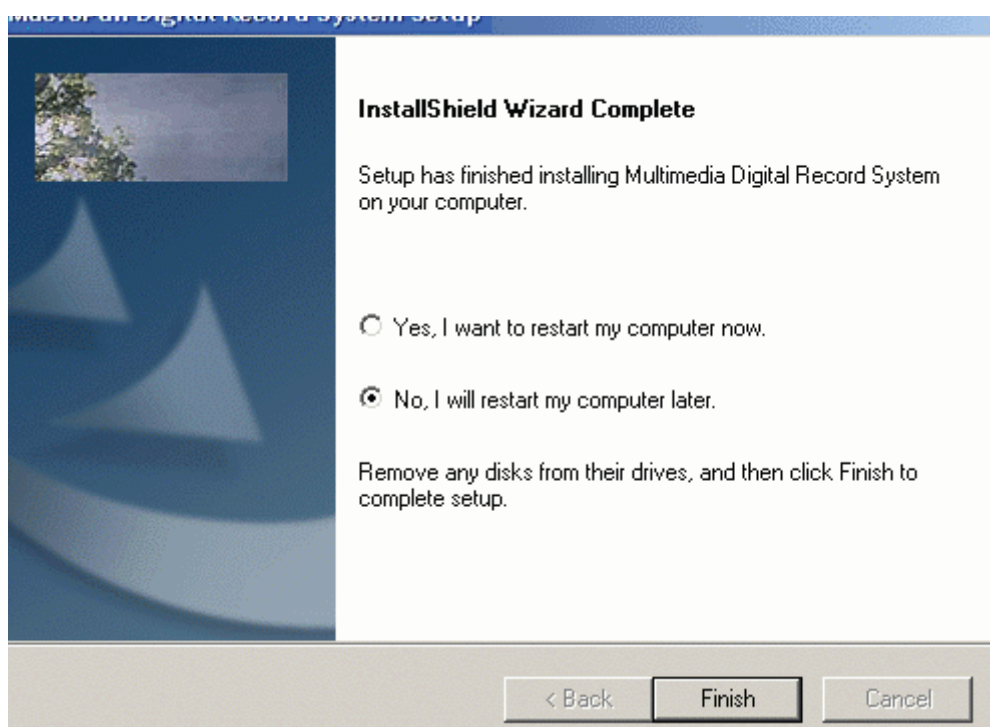
ii

8. The installation progress window will pop up:



ii

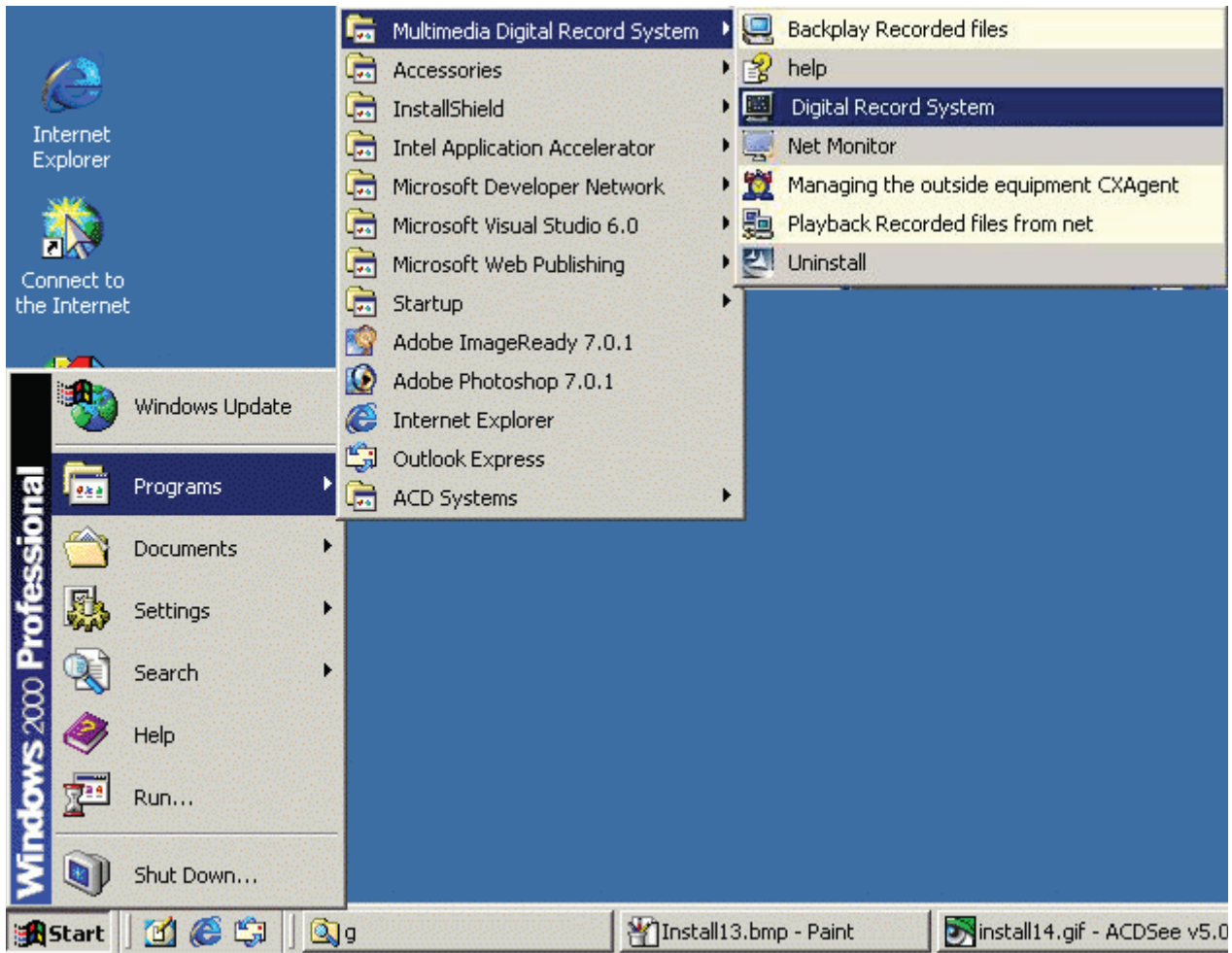
9. InstallShield Wizard Completes :



For first time installation, please restart computer.

Running

After reboot, open the software as follows:

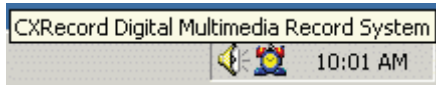


1. There is a icon of "Digital Record System" on the desktop. Double click the icon to run the program.
2. Select "Net monitor" to run client software.

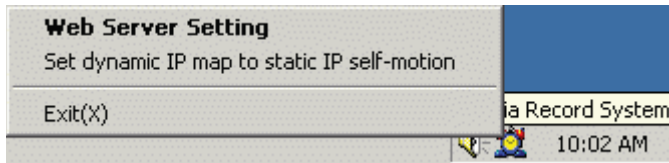
3. Select "Managing the outside equipment CXAgent" to run Web Server Settings.

The Introduction of the CXAgent

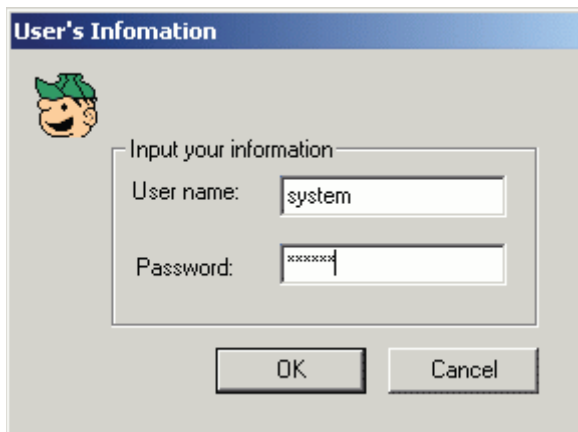
CXAgent icon will show at the windows toolbar:



Right click the CXAgent icon to pop up the menu below:

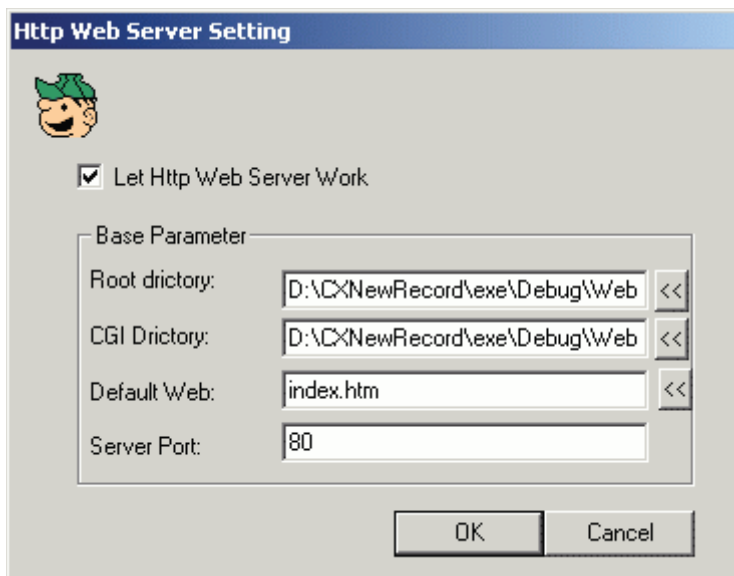


1.Login ,Left click the Web Server Setting to log in:



2.Setting web server

Shown as below:



Root Directory: Store all Web service files, HTM files and other plugins for the browser. But not support script.

CGI Directory: Store all scripts, cannot browse and download.

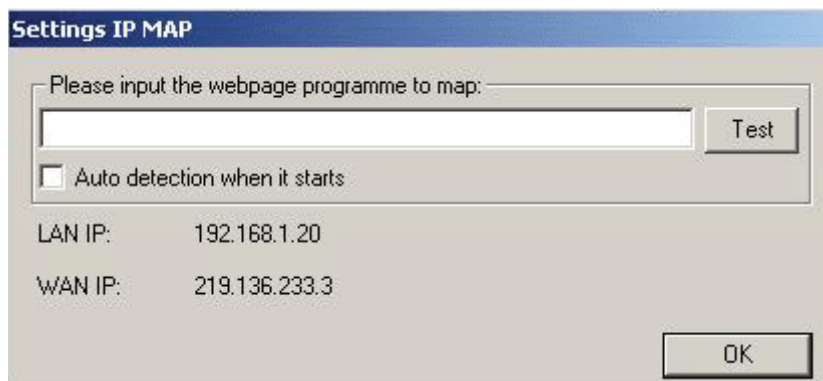
Default web: Default browsing webpage.

Server port: Default use 80 in Http Web Server, please don't change this port.

ii

3.Set Dynamic IP map to Static IP

Graph shown below:



The image shows a Windows-style dialog box titled "Settings IP MAP". It has a blue title bar. Inside, there is a text prompt "Please input the webpage programme to map:" followed by a text input field and a "Test" button. Below this is a checkbox labeled "Auto detection when it starts". At the bottom left, it displays "LAN IP: 192.168.1.20" and "WAN IP: 219.136.233.3". An "OK" button is at the bottom right.

Settings IP MAP

Please input the webpage programme to map:

☐ Auto detection when it starts

LAN IP: 192.168.1.20
WAN IP: 219.136.233.3

Introduction of the main interface

Graph shown below:

Introduction of the main interface

Graph shown below:



Windows : Red color border will appear on selected window. Double click the selected window to either enlarge or restore. Right click to pop up Menu.



Manual Recording : Press this button to record manually.



Snapshot : Left click to capture image, right click to edit the captured image. you can press key "F2" to capture image too. The pop-up the image editing window will pop-up after 8 seconds since your last snapshot.



Sound : Audio on or mute.



Alarm Settings : Set up alarm equipments.



E-Map : Left click to view, right click to edit.



System Settings : Display all system settings.



System log : Left click to view system log, right click to view alarm log.



Playback : Left click for local playback and right click for network playback.



System Help : Press this button to open Help menu, or press " F1" to open the system help.



Reset : Reset Overlay settings.



Overlay Controls : Adjust brightness, contrast, saturation and hue.



PTZ Controls : Control PTZ positions, iris, zoom, focus, and Auto Pan (Supported Cameras Only).



Optional PTZ functions : Press the "O" to work(Open), press the "C" to stop (Close)



Number of Channels : Press the left button to display the number of channels to view. Press the right button of mouse to switch video.the switch time can be setted at "systems setting".



SlideShow : Switch channels to view or view few channels at the same time.



Record Status : There are four color signal lights in this status.



If it is green, it means the manual recording is on



If it is navy blue, it means the channel is ready.



If it is light blue, it means the motion detect is on.



If the button is Red, it means the schedule recording is on.



Alarm Status : There are three color signal lights in this status



If the button is green, it means no signal.



If it is navy blue, it means the channel is ready.



If it is red, it means moving object detected on that channel, please check the channel.

ii



Date and time/Hard Disk Usage : Display date, time and usage of hard disk(s).



Power : Exit the program. (Authorize users only)

ii

ii

ii

ii

Menu

Click a arbitrary image and click the right button of yours mouse to pop the menu, graph shown as below :

| | |
|--|---|
| Start Manual Record All Start Manual Record All Stop Manual Record | Stop Manual Record All Start Manual Record All Stop Manual Record |
| Snapshot(F2) Edit Snapshot(F3) | Snapshot(F2) Edit Snapshot(F3) |
| New user login(F4) Client Connection Status | New user login(F4) Client Connection Status |
| Control Video Matrix | Control Video Matrix |
| Speech | Speech |
| Habitual Settings | Habitual Settings |
| Soft Keyborad Full Screen Lock System | Soft Keyborad Full Screen Lock System |
| This channel is not recording | This channel is recording |

Start record: The selected channel starts to record

Stop record: The selected channel stops to record

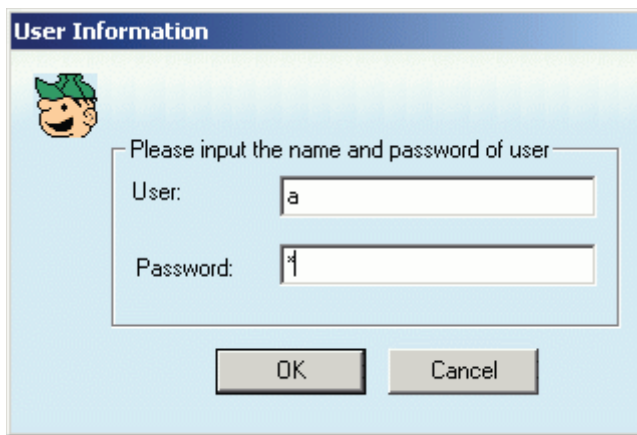
All start record: All channels start to record includes no showing images

All stop record: All channels stop to record includes no showing images

Snapshot: Snap an image of the selected video clip, you can press F2 to snap also.

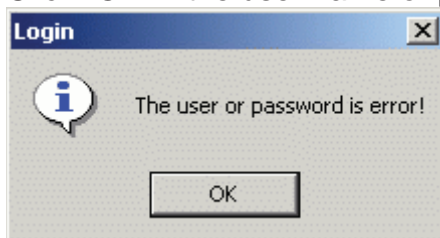
Edit image: Edit the captured images, you can press F3 to edit

Login with new user: Login with other user name, you can press F4 to do it, graph shown below :



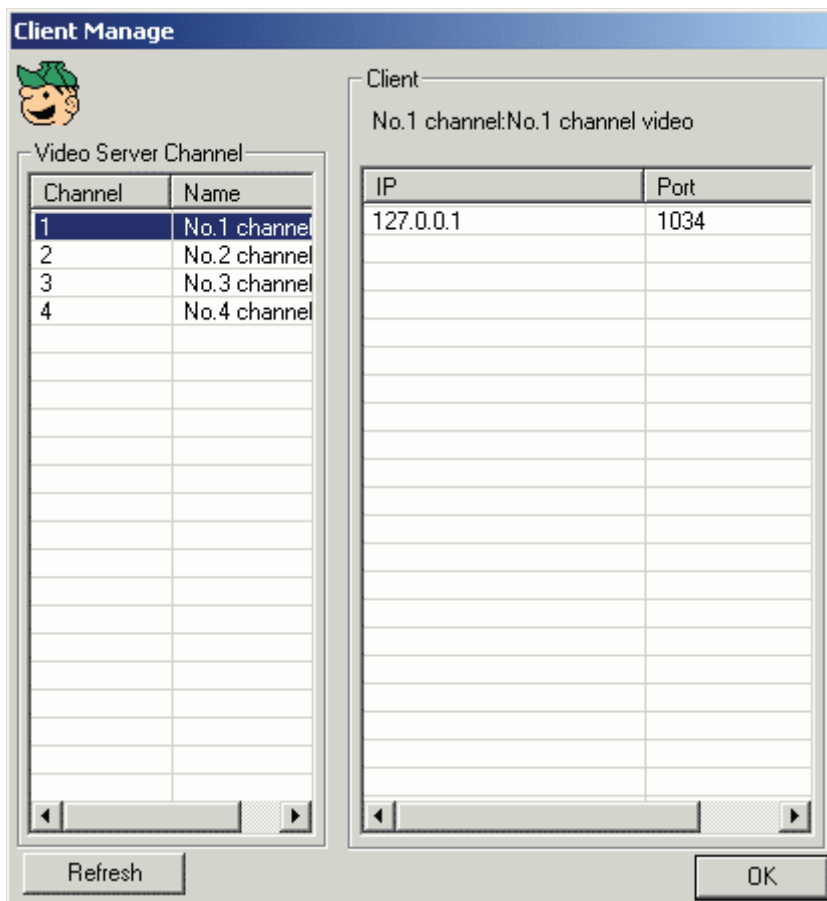
A dialog box titled "User Information" with a blue header bar. On the left is a cartoon character icon. The main area contains the text "Please input the name and password of user". Below this are two input fields: "User:" with the text "a" and "Password:" with a single asterisk "*" (indicating a masked password). At the bottom are "OK" and "Cancel" buttons.

Click "OK" if the user name or password is error, it will show the message as follow:

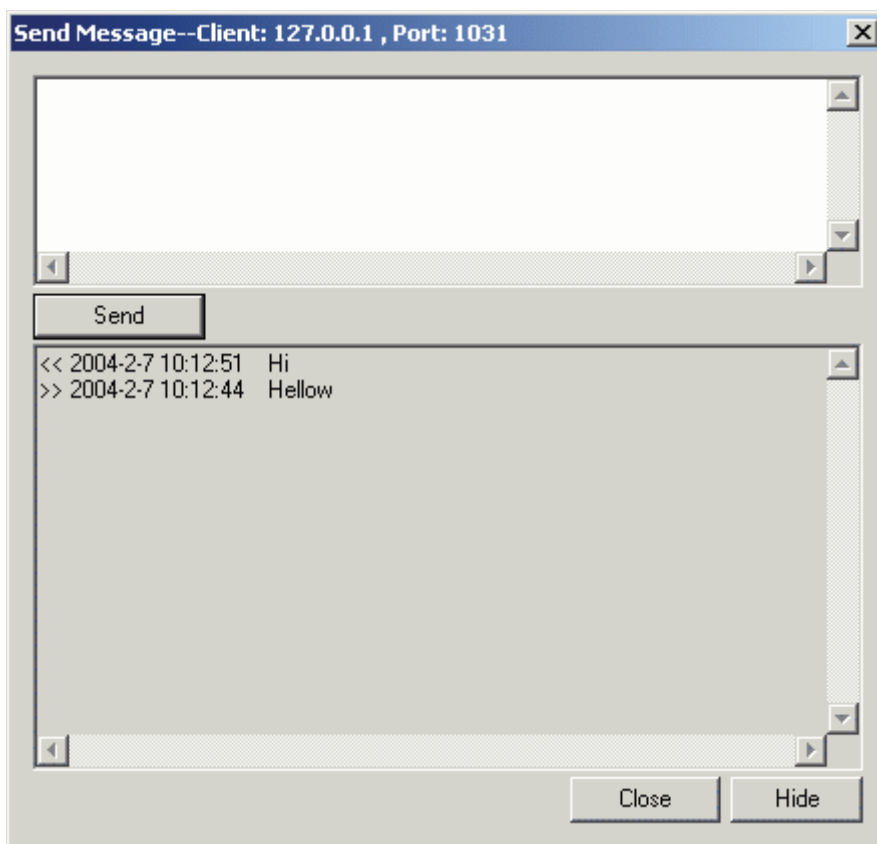


If it is correct, the system will download information with its access level.

NetWork Status: graph shown below :



Click the 'Video Server Channel' on the left box, it shows all users that connect to the server. Select the user from on the right box, you can chat with the client.
Graph shown below :



Video Settings

Graph shown below :

Current user:d.Press F4 to change user

Display channel name settings

Font color:

Selected font color:

Font size:

Slide show interval: Sec

Standby wallpaper:

☐ Enable display channel name
(Will not show on video clip)

☐ Use speech talk

Record setting

Record file time: Min

☒ Auto recycle when all disks full

☒ Start record when reboot

Alarm sound

☒ Use motherboard speaker

☐ Use computer speaker

Protocol:

Net monitor port:

Net playback port:

Auto lock time: Sec

☐ Auto shutdown when system exit

☒ Use software WatchDog

☐ Use hardware WatchDog

Reboot control

Operation:

Day:

Time:

| CH | CH name | NetWork | PTZ type | PTZ address | COM | Baud Rate | Test | Standard | Coding Type | Stream M |
|----|-----------|-------------------------------------|----------------------|-------------|-----|-----------|--------------------------|----------|----------------------|------------|
| 1 | Channel 1 | <input checked="" type="checkbox"/> | <input type="text"/> | | 1 | Default | <input type="checkbox"/> | 1: NTSC | <input type="text"/> | 1: Video : |
| 2 | Channel 2 | <input checked="" type="checkbox"/> | <input type="text"/> | | 1 | Default | <input type="checkbox"/> | 1: NTSC | <input type="text"/> | 1: Video : |
| 3 | Channel 3 | <input checked="" type="checkbox"/> | <input type="text"/> | | 1 | Default | <input type="checkbox"/> | 1: NTSC | <input type="text"/> | 1: Video : |
| 4 | Channel 4 | <input checked="" type="checkbox"/> | <input type="text"/> | | 1 | Default | <input type="checkbox"/> | 1: NTSC | <input type="text"/> | 1: Video : |

Video settings Recording schedule Motion detect Display settings Alarm control Manage users System Information

Display Channel Name settings :

Font color : The font color that will display on all the channels.

Selected Font color : The font color of the selected channel.

Font size : Select the font size that you wish to display on all the channels.

Slide Show Interval : Select the time interval of the slide shows between the channels.

Standby Wallpaper : The selected picture will appear on the windows which are not connected to any video channel.

Record Settings :

Record file time : Determine the recorded file size.

Auto recycle when all disks full : Automatically delete the earliest recorded files when the hard disk(s) reaches its maximum capacity.

Start record when reboot : The program will automatically restart and record after the computer is reboot.

Alarm Sound : The system will use the motherboard speaker or computer speaker or both to alarm users when the motion detect is triggered.

Auto Lock Time : System will automatically relock the system after selected time frame. It prevents other users to access the program without authorization.

Auto shut down when system exit : Shut down the computer when the you exit the program.

Use software WatchDog : The system will monitor all the activities in the program.

Use hardware WatchDog : Work like the dongle. The program will not start if the pre-programmed hardware is inserted.

Reboot Control : For the stability of the system, you can reboot or shut down the system on selected day and time.

Network communication protocol : Provides three kinds of communication protocols, We recommend users to use Multicast or UDP protocol in LAN, while the UDP protocol in Internet and the TCP protocol should be used the least.

Video Parameter Settings :

CH : Channel number.

CH Name : Customize your desired name for each channel. (warehouse, showroom, meeting room etc)

Network : Check the channel(s) you wish clients to view on the network.

PTZ type: Select the PTZ camera.

PTZ address: Display the location of the PTZ camera. (driveway, backyard, parking lot etc)

Communication port : The port where the PTZ camera is connected. (COM1, COM2, COM3 etc)

Baud Rate : Under the PAL system adjustable scope is 1-25/second, and under the NTSC system is 1-30/second

Standard: Support the PAL system and the NTSC system

Coding Type : Decision image size, under the PAL system, CIF is 352x288, QCIF is 176x144, while under the NTSC system, CIF is 352x240, QCIF is 176x120.

Stream Model : Select the streaming type for recording.

Picture quantity: Select the

Misty degree: Profession technical term is "Quant". This value is more big, its mosaic is much, but code size is small.

Key frame interval: That is I frame interval. When the system decode, it wants to be from the of I to start decode. A namely basic, record a complete picture information, its code size is the other type in ratio is big 3-5 times, that value changes the conference descent code stream, but will give the solution code the empress the picture quantity bring the influence.

Max bps: The system use the method of limit code size and dynamic code to recode. Generally the actual code stream at should worth 40%-80% space, customer can estimating hard dish needing, each channel per hour is: (the code stream $\text{bps} \times 3.6 / 8000 \times 60\%$, the unit is a MB/hour/channel, if adopt a hour (namely 512000), for $(512000 \times 3.6 / 8000) \times 60\% = 138$ MB/hour/channel. The actual inside may compare should worth and smaller (static state each hour roughly 40 MB), or larger (the biggest is $512000 \times 3.6 / 8000 = 230$ MB/hour/channel). On the general circumstance, Best picture quantity is 800 Ks Ks-2000ses, better picture quantity is 500 Ks Ks-800ses, good picture quantity is 380 Ks Ks-500ses, than bad picture quantity is 256 Ks Ks-380ses, baddish picture quantity smaller 256 Ks. Can see the

Recording Schedule

Graph shown below:

[illegible]

1. Add : Select the date and time for specific channel.
2. Set to all channels : All channels will record at the same time.
3. Delete : Cancel selected days and time.
4. Reset : Delete all selected days and times for one specific channel.
5. Reset all channels : Delete all selected days and times for all channels.
6. Enable schedule with this channel : Check this box to enable recording schedule for one specific channel.

Motion Detect

Graph shown below :

[illegible]

Select Channel :

1. Reset : Clear one specific channel, no area selected.
2. Reset all channels : Clear all channels.
3. Select all areas : All areas are selected for one specific channel.
4. Set to all channels : All channels will have the same areas enable for motion detect.

Note : Users can select any specific area to be enable for motion detect.

Enable Day :

1. Add : Enter date and time for one specific channel.
2. Delete : Delete date and time for one specific channel
3. Reset : Clear all dates and times for one specific channel.
4. Reset all channels : Clear all dates and times in all channels.

Alarm Sound : Select specific siren for triggered alarm.

Zoom detected channels : Zoom in to the moving object detected channel.

Save snapshot : Save the moving object detected images into a specific file.

Enable reverse motion detect function, alarm activates after stop moving : This function applies to PTZ camera or AutoPan camera only. The alarm will be activated when the camera stop moving for a selected time frame.

Send e-mail:

E-Mail settings

Consignee information

To: 123456@google.com

Copy to:

Subject: a

Content: hhhhhhhhhh

☒ Attached alarm Interval: 1 Minute

Addresser information

Send Address: abc@yahoo.com

SMTP Server/Address: mail.yahoo.com

Port: 25

☒ Authorization

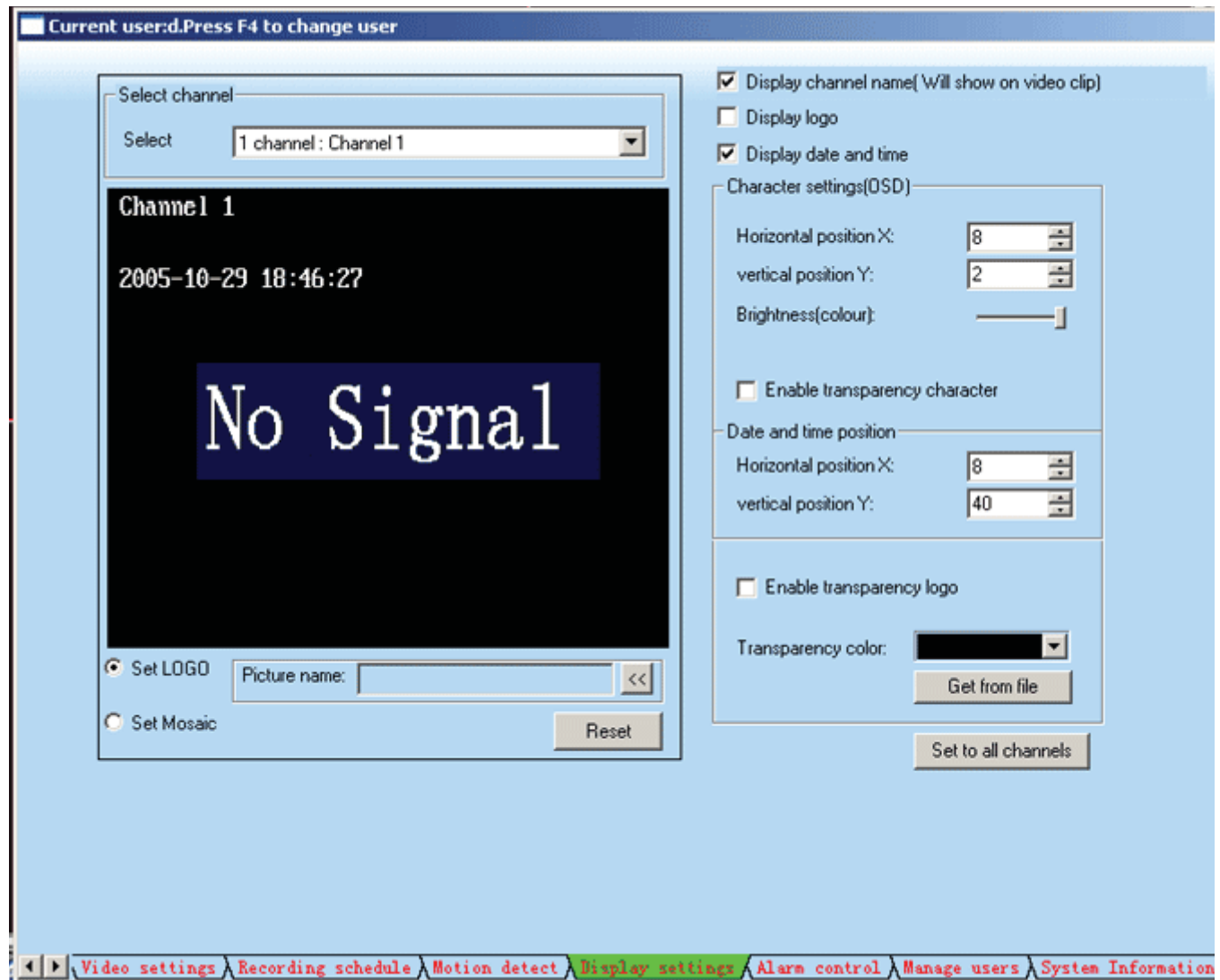
User Name: abc

Password: xxxxxx

Test E-Mail OK CANCEL

Display Settings

Graph shown below:



1. Set Logo : Users could set the desired logo on the display.

2. Set Mosaic : For privacy reason, users could set the Mosaic function on selected area.
3. The channel name and date could be adjusted horizontally and vertically by using the OSD buttons.
4. For better viewing the objects, characters on the screen could be transparentized.

Alarm Control

Graph shown below :

Current user:d.Press F4 to change user

Properties of alarm control

Note:Only one type of alarm control allowed in the same communication port

| Name | Address |
|------|---------|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

Type of alarm control:

Name:

Address:

Communication Port:

Edit Add
Properties Delete

| Start Time | End Time | Sunday | Mo |
|------------|----------|--------|----|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Start time:
End time:

Enable Day:
☐ Sunday ☐ Monc
☐ Tuesday ☐ Wed
☐ Thursday ☐ Friday
☐ Saturday

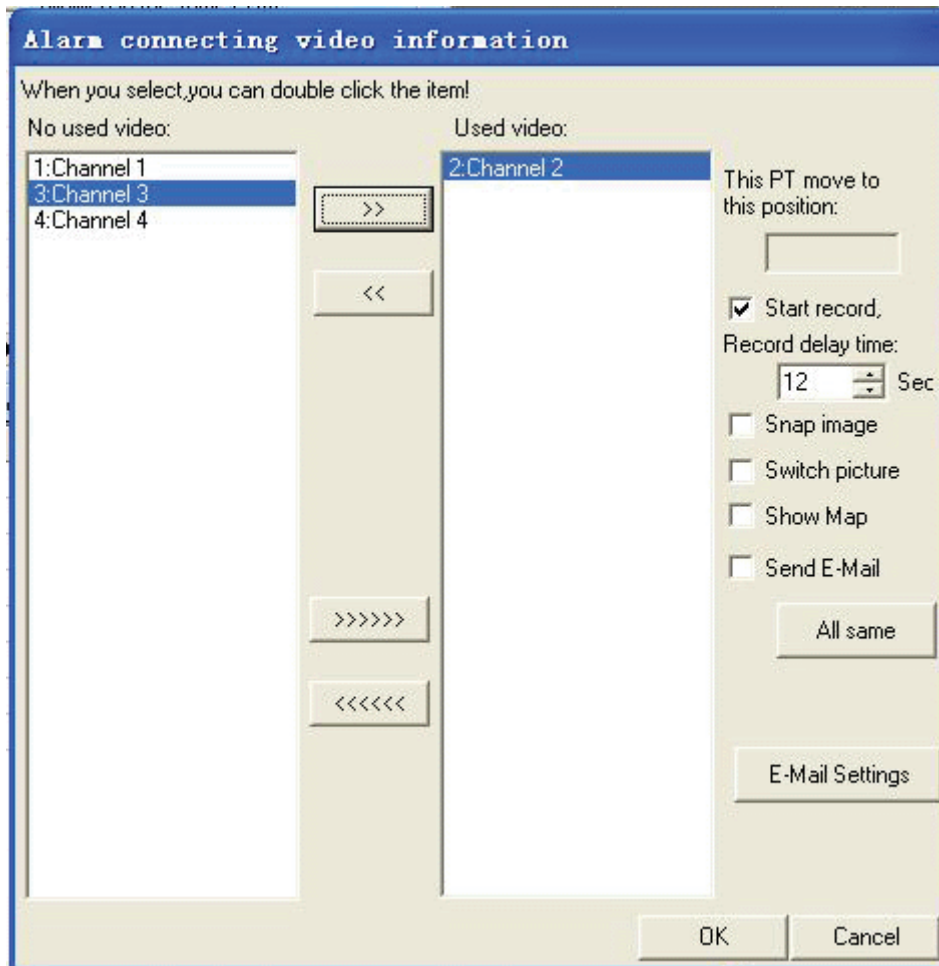
Add Delete
Reset All

| Input jack | Name | Importance... | Alarm sound | Calling phone | Linkage at ... | Linkage | Output jack | Name | Output par... |
|------------|------|---------------|-------------|---------------|----------------|---------|-------------|------|---------------|
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
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| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Video settings Recording schedule Motion detect Display settings Alarm control Manage users System Information

Properties of alarm control :

1. Type of alarm control : Select the alarm equipment from the list.
2. Name : Name the alarm equipment.
3. Address :
4. Communication Port : Select the COM port which the alarm equipment connected.
5. On the right side, select the days and time for which the alarm equipments to be working.



Alarm connecting Outport information

Alarmer's address is't 0,the first port is 1

| Output Port | Output p... |
|-------------|-------------|
| 2 | 1 |

Output jack 3 settings

Set output jack property

Work type:

1:Output all along

0:Don't output

1:Output all along

2:Output by pluse and do

3:Output by duration

4:Output by pulse

5:With input synchronous

Putout voltage(0,1):

Delay Time:

continuum time:

stop time in midway:

0

Sec

Number of plus cycle:

0

Whack

Set

OK

Canel

<

>

Add

Delete

OK

Canel

Manage Users

Graph shown below :

The screenshot displays a software interface titled "Manage Users". At the top, a status bar indicates "Current user:d.Press F4 to change user". The interface is divided into three main sections: "Administrator", "Setting default login user", and "General user".

Administrator Section: Contains three input fields for "User Name:", "Password:", and "Confirm password:", followed by a "Set" button.

Setting default login user Section: Contains three input fields for "Default user:", "Password:", and "Confirm password:", followed by "Set" and "Reset" buttons.

General user Section: Features a table with two columns, "User" and "Password". The table has 10 empty rows. To the right of the table are two buttons: "Add user" and "Delete user". Below the table is a horizontal scrollbar and an "Access level" button.

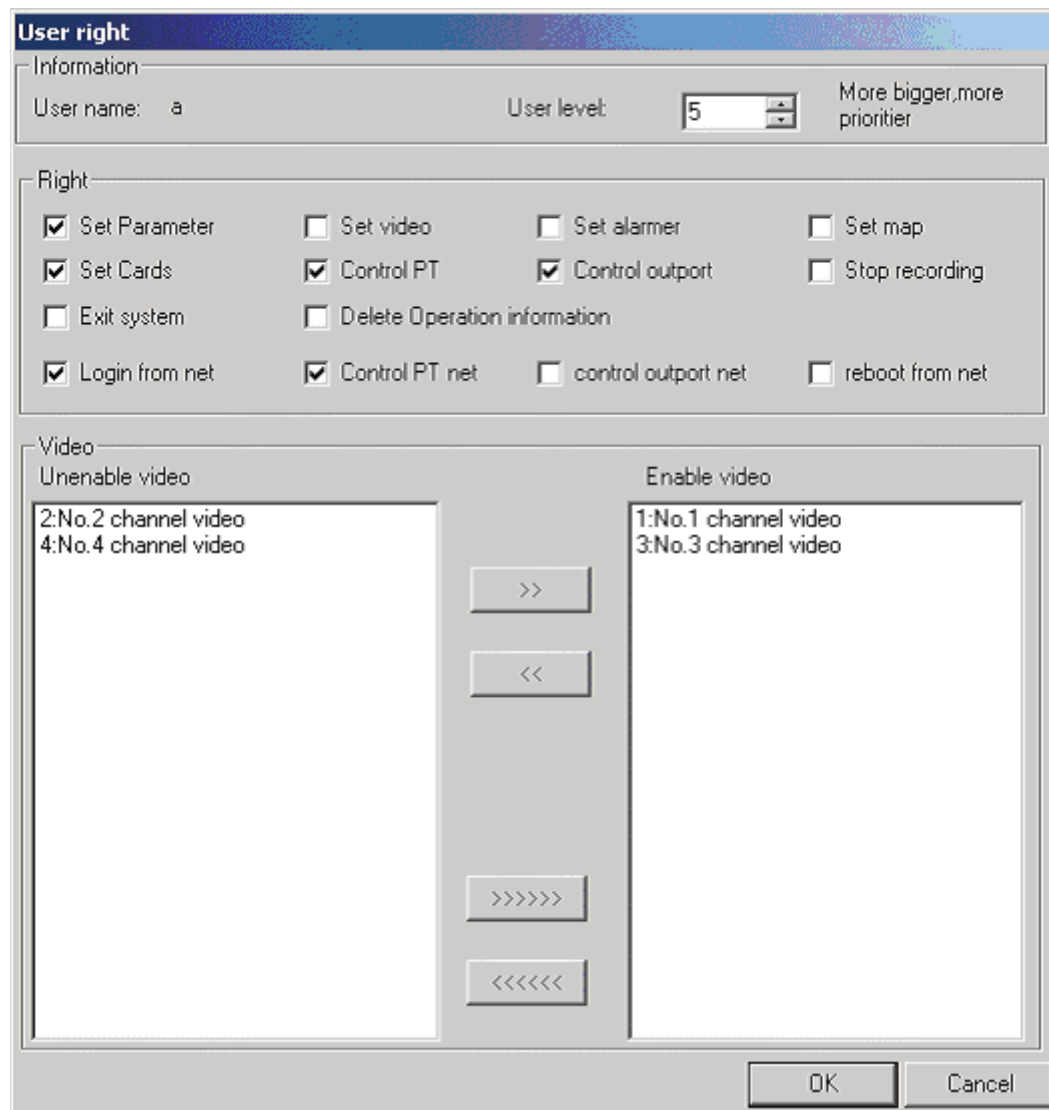
Navigation Bar: Located at the bottom, it contains several tabs: "Video settings", "Recording schedule", "Motion detect", "Display settings", "Alarm control", "Manage users" (which is highlighted in green), and "System Information".

Administrator: The default administrator is: **system**, password is: **system**. Users could

change the user name and password.

Default login user:: When the program starts, it will login to the program with this user.

General user : Administrator could add or delete users, each user could be assigned to different access level by pressing 'Access Level'.



The 'User right' window is a configuration interface for user permissions. It features a title bar and three main sections: Information, Right, and Video.

Information section: Contains a 'User name' field with the value 'a', a 'User level' spinner box set to '5', and a text label 'More bigger, more prioriter'.

Right section: A grid of checkboxes for various permissions:


| Permission | Checked |
|------------------------------|---------|
| Set Parameter | Yes |
| Set video | No |
| Set alarmer | No |
| Set map | No |
| Set Cards | Yes |
| Control PT | Yes |
| Control output | Yes |
| Stop recording | No |
| Exit system | No |
| Delete Operation information | No |
| Login from net | Yes |
| Control PT net | Yes |
| control output net | No |
| reboot from net | No |

Video section: Divided into two panes. The left pane, 'Unenable video', contains a list with '2:No.2 channel video' and '4:No.4 channel video'. The right pane, 'Enable video', contains a list with '1:No.1 channel video' and '3:No.3 channel video'. Between the panes are four buttons: '>>' and '<<' for moving items between lists, and '>>>>' and '<<<<' for moving multiple items. At the bottom right are 'OK' and 'Cancel' buttons.

Systems information

Graph shown below :

Current user:d.Press F4 to change user

 Digital Record System V6.2 b20051027

Information of video cards

Type of card: MVT44 H264
Num of channel: 4

Serial Info

Welcom use Digital Record System

Special function infimation

☐ Support game joystick to control PTZ(Need DrictX8) ☐ Support disks dormancy
☐ Support old joystick to control PTZ ☒ Support CD record
☐ Support net port mapping

Windows auto login setting

User: Long Set
Password: Clear

Record disks information

| Hard disk partition | Capacity(MB) | Space avialable(MB) | Partition use |
|---------------------|--------------|---------------------|-------------------------------------|
| D | 105505 | 59337 | <input checked="" type="checkbox"/> |
| E | 59057 | 42154 | <input checked="" type="checkbox"/> |
| F | 104855 | 54297 | <input checked="" type="checkbox"/> |

The system partition C This partition don't use to record


Video settings Recording schedule Motion detect Display settings Alarm control Manage users System Information

1.User must register the card in order to use the features. Double click the window on the

screen and it will show the expired date of the program. There will be no change if the card is registered.

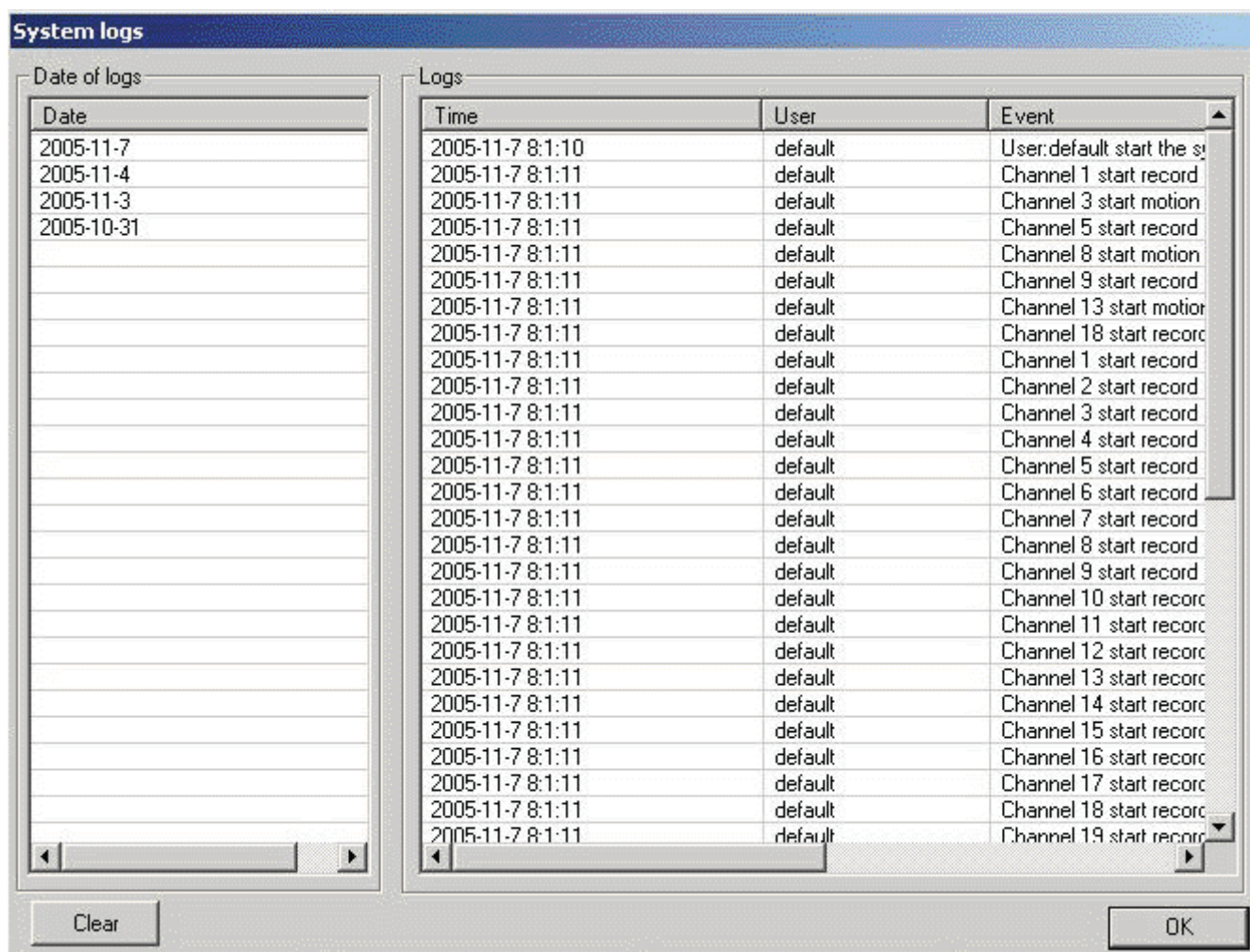
2.If OS need loginning, please set in" Windows volunteer landing setup", the system will login with the above account number landing.

Operation log and Alarm log

Left click the  button view operation log. Right click to view alarm log.

Operation log:

This function can only be operated by administrator, graph shown below:



Select the date on the left column, it will show all activities on that specific date.

Alarm log:

Graph shown below:

Printing information

| | |
|---|---|
| <p>Set printer</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> print the head <input checked="" type="checkbox"/> print the foot <input checked="" type="checkbox"/> print colum separator <input checked="" type="checkbox"/> print line separator <input checked="" type="checkbox"/> reset the row width up to maximum <input checked="" type="checkbox"/> delete redundant row | <p>Set font</p> <p>the size of font in the head: MS Sans Ser 12</p> <p>the size of font in the content : MS Sans Ser 12</p> <p>the size of font in the foot: MS Sans Ser 12</p> |
|---|---|


Setting printer Print Exit

ii

ii

ii

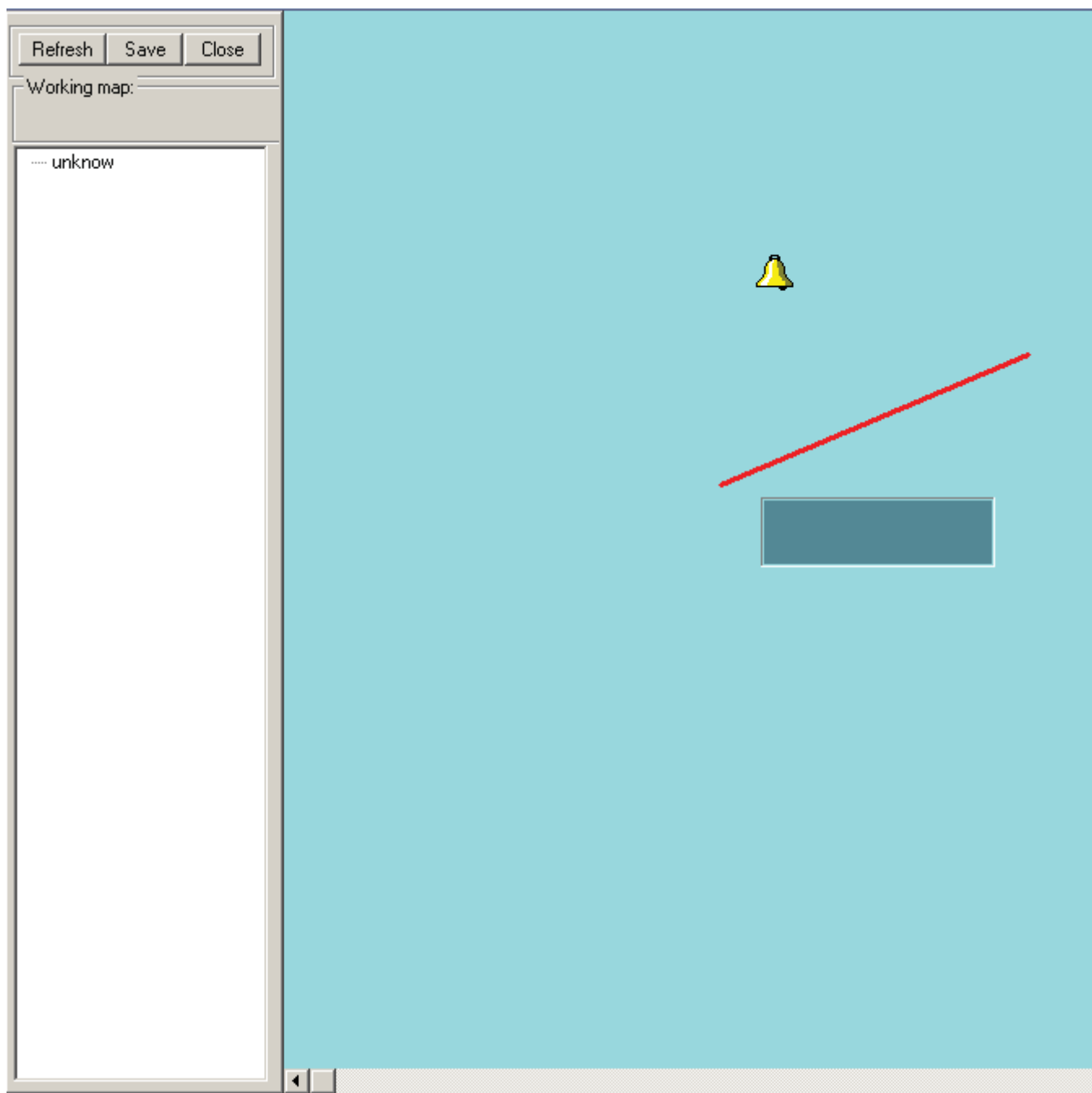
E-Map

Left click the  button to view e-map. Right click to design your own e-map.

Designing E-Map

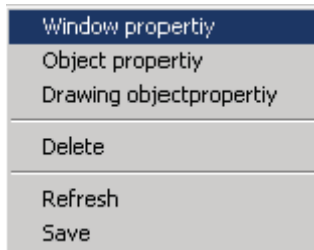
ii

Design your own e-map inside a window, graph shown below:

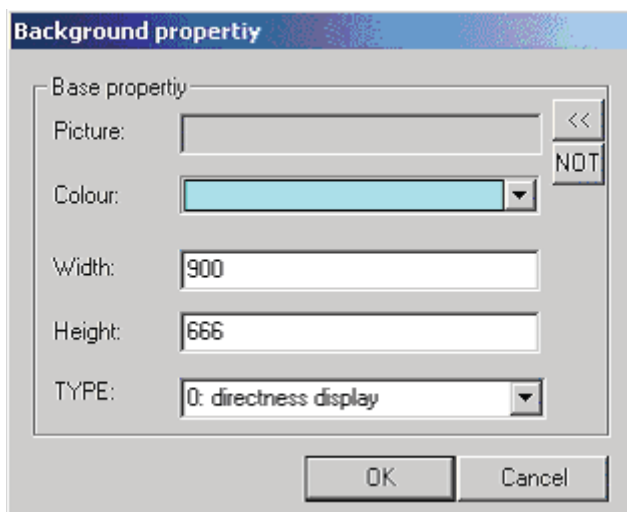


E-Map interface settings and basic operation

Right click on the designing e-map window to pop out the menu below:



I. Select "Window property" to pop out the window as follows:



User can insert pictures, adjust color and the size of the pictures.

II. Refresh

User should refresh the window from time to time to get rid of the trash while designing the e-map.

E-Map management

There is a e-map management window on the left side of the "design window", graph shown below:

RefreshSaveClose

Working map:
unknow

unknow

New mapDelete mapRename mapSave mapRefresh

Right click to pop out the menu shown above. Double click the 'designing window' to show or close the window.

Tools bar of Drawing map

Graph shown below:



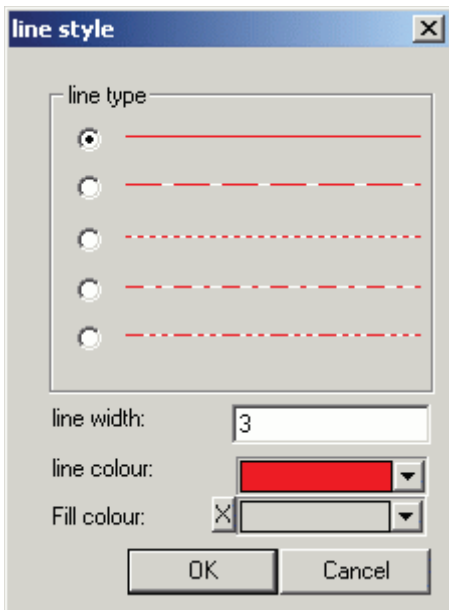
Drawing line

Step are as follows:

1. Select "Draw line" from "[Tools bar of Drawing map](#)";
2. Select the start point and press the left button of your mouse;
3. Move your mouse to the end point, then release the button, the line is drawn.

Changing parameter of straight line:

1. Select "select object" from "[Tools bar of Drawing map](#)";
2. Select the line you want to edit, then color of the line is changed;
3. Move the drawn line by clicking left button of the mouse and drag it.
4. Right click to pop out menu, then select "Draw object property", window below will pop out.



5. Press 'OK' to finish the change.

Note: After the parameter is changed, the system will use the new parameter to draw lines.

Drawing broken line

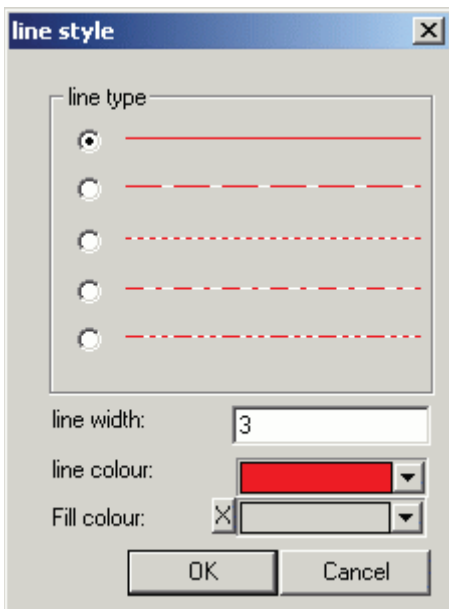
Steps are as follows:

1. Select "Draw broken line" from "[Tools bar of Drawing map](#)";
2. Select the start point and left click on the mouse;
3. Move your mouse to one point, then release the button.
4. Repeat step 3. Right click the mouse when it comes to an end. The broken line is finished.

Changing parameter of broken line:

1. Select "select object" from "[Tools bar of Drawing map](#)";
2. Select the line you want to edit, then color of the line will change;
3. Left click the mouse to drag the line.

4. Right click the mouse to pop out the menu. Select "Draw object property", window below will show up:



5. Click "OK" to finish.

Note: The system will follow this parameter after the change has been made.

Drawing ellipse or round

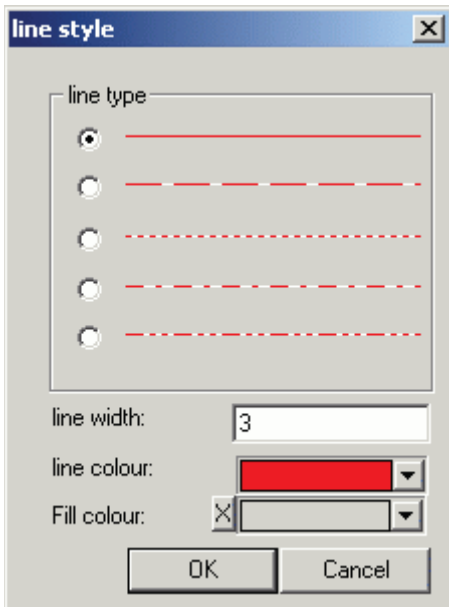
Step are as follows:

1. Select "select ellipse or round" from "[Tools bar of Drawing map](#)";
2. Select start point, left click your mouse;
3. Move the mouse to end point, release the button, an ellipse is drawn.

If you want to draw a round shape, press the "Shift" key while you are drawing.

Changing parameters:

1. Select "select object" from "[Tools bar of Drawing map](#)";
2. Select the ellipse or round you want to make a change, border will be shown around it;
3. Left click your mouse to drag the ellipse.
4. Right click your mouse to pop out menu. Select "Draw object property", a window below will pop out:



5. Click 'OK' when you are done.

Note: The system will follow the new parameter after it has been changed.




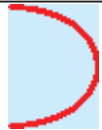
Drawing arc

Steps are as follows:

1. Select "draw arc" from "[Tools bar of Drawing map](#)";
2. Select start point, left click your mouse;
3. Move the mouse to end point, release the left button of the mouse. An arc is drawn.

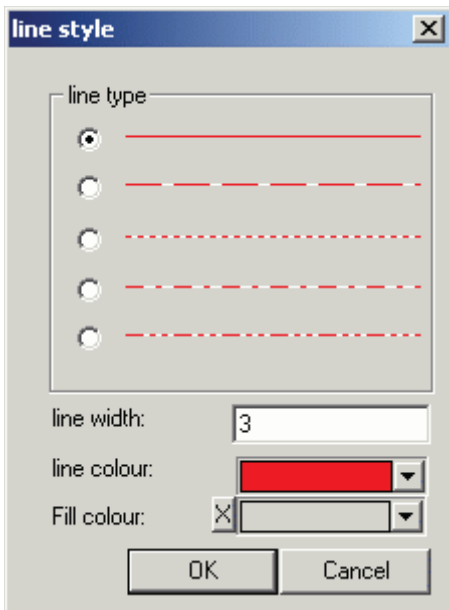
Key point:

The system provides four different directions of arc, they are as follows:

| Type | Image | Drawing method |
|------|---|--|
| 1 |  | The end point is bottom right of start point |
| 2 |  | The end point is top right of start point |
| 3 |  | The end point is top right of start point |
| 4 |  | The end point is bottom right of start point |

Changing parameters:

1. Select "select object" from "[Tools bar of Drawing map](#)";
2. Click the arc of you want to edit, then a border will appear around the arc;
3. Left click your mouse to drag the arc;
4. Tight click your mouse to pop up the menu. Select "Draw object property", a window will show up as follow:



5. Press 'OK' when you are done.

Note: The system will follow the new parameters once it has been changed.

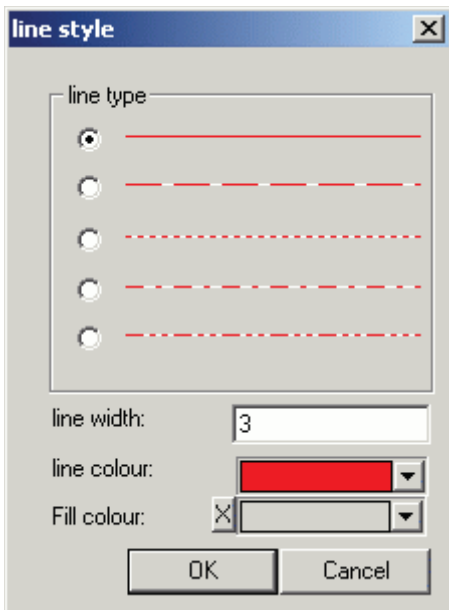
Drawing rectangle

Steps are as follows:

1. Select "Draw rectangle" from "[Tools bar of Drawing map](#)";
2. Select start point, left click on your mouse;
3. Move the mouse to end point, release the left button of the mouse. A rectangle is drawn.

Changing parameters:

1. Select "select object" from "[Tools bar of Drawing map](#)";
2. Click on the rectangle, a border will be formed around the rectangle;
3. Click on the rectangle and drag it.
4. Right click on your mouse to pop out the menu. Select "Draw object property", a window below will show up:



5. Click 'OK' to finish'.

Note: The system will use the new parameters once it has been changed.

ii

Drawing Text Remark

Steps are as follows:

1. Select "Draw Text remark" from "[Tools bar of Drawing map](#)";
2. Left click on your mouse to draw a rectangle;
3. Adjust the size of the rectangle, you can input text inside the rectangle;
4. After finish inputting text, click any point outside the rectangle, then it is done.

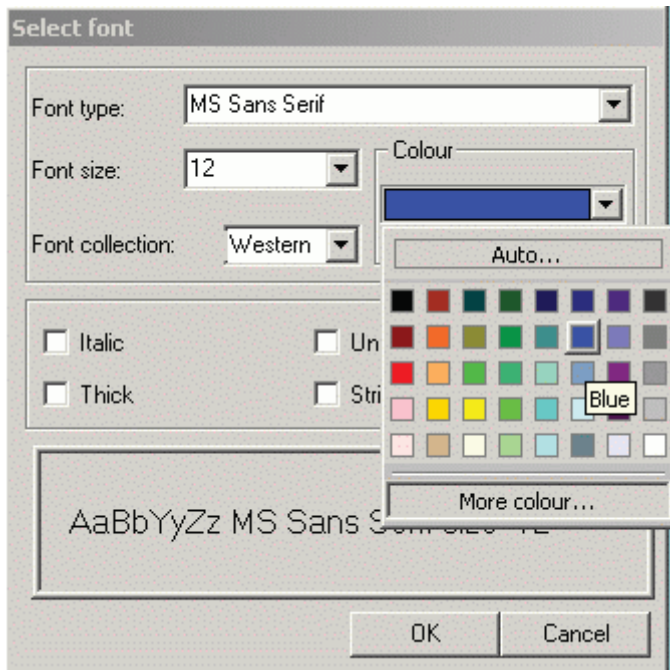
Edit text:

1. Select "select object" from "[Tools bar of Drawing map](#)";
2. Select the text box you want to edit;

3. Click the text box, it will display a new input text box;
4. Input new text to the input box;
5. After finish inputting text, click any point outside the rectangle, then it is done.

Changing parameters:

1. Select "select object" from "[Tools bar of Drawing map](#)";
2. Select the text box you want to edit;
3. Right click on your mouse to pop out the menu. Select "Draw object property", a window below will show up. You can make adjustment to the text.



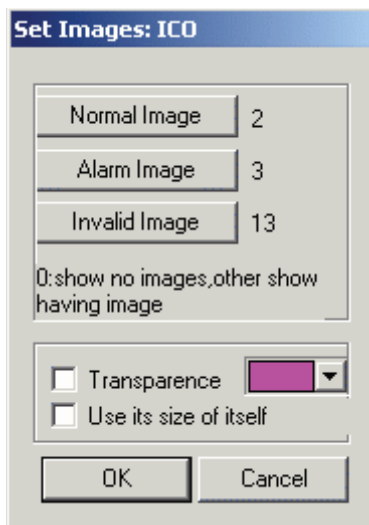
4. Select 'OK' to finish.

Note: The system will follow the new parameters once it has been changed.

Drawing icon

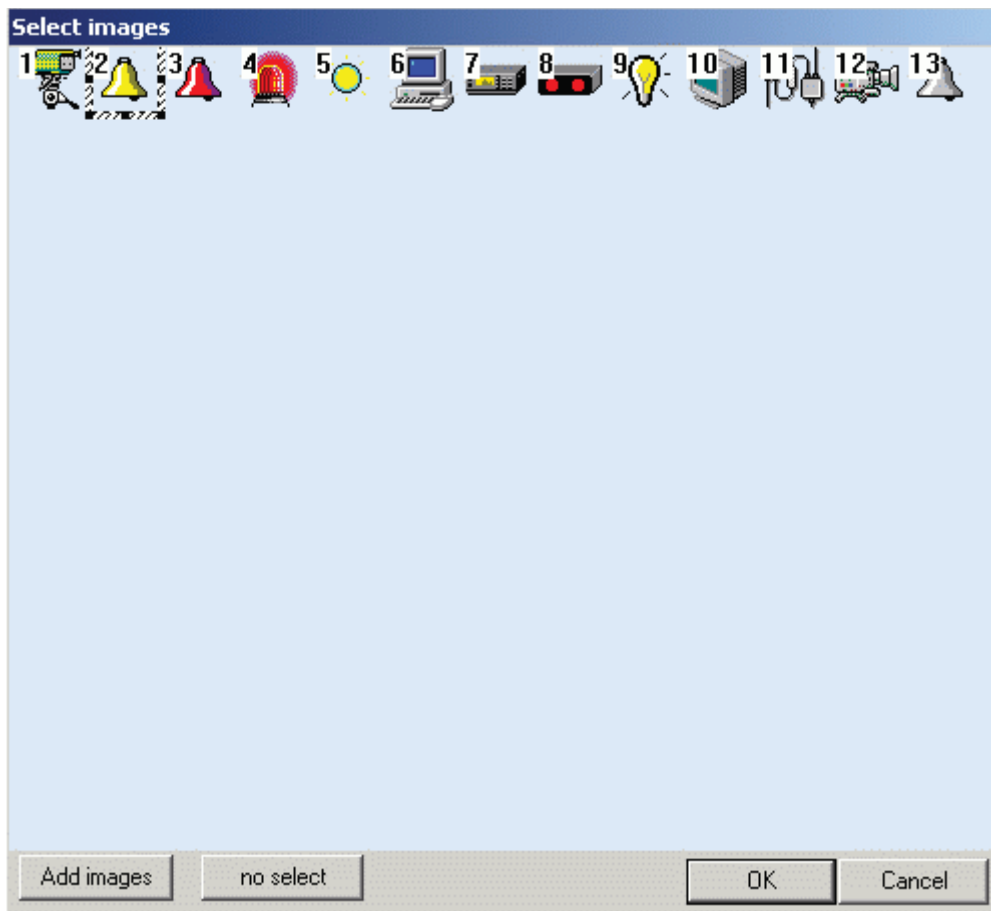
Steps are as follows:

1. Select "drawing icon" from "Tools bar of Drawing map";
2. Select start point, left click on your mouse;
3. Move the mouse to end point, release the button.
4. It will pop out the menu as follow:



<Graph 1>

5. Select one icon for each category from the graph below:



<Graph 2>

6. Users could add extra images by clicking 'Add Images' button;
7. After finish selecting the icons, click 'OK' to finish.

Changing parameter:

1. Select "select object" from "[Tools bar of Drawing map](#)";
2. Click on the icon that you want to edit, a border will surround the icon;
3. Left click on the icon, then drag it.
4. Right click to pop out the menu. Select "Draw object property", a window will show up.

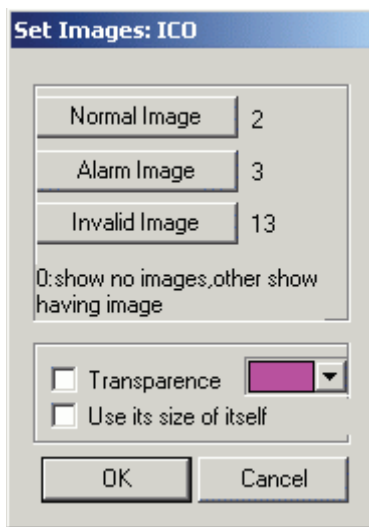
Note:

1. Each e-map will store its icons and bitmaps into its own library. So, a library will be generated each time an e-map is created.
2. Users can view the e-map on any computers.

Drawing image

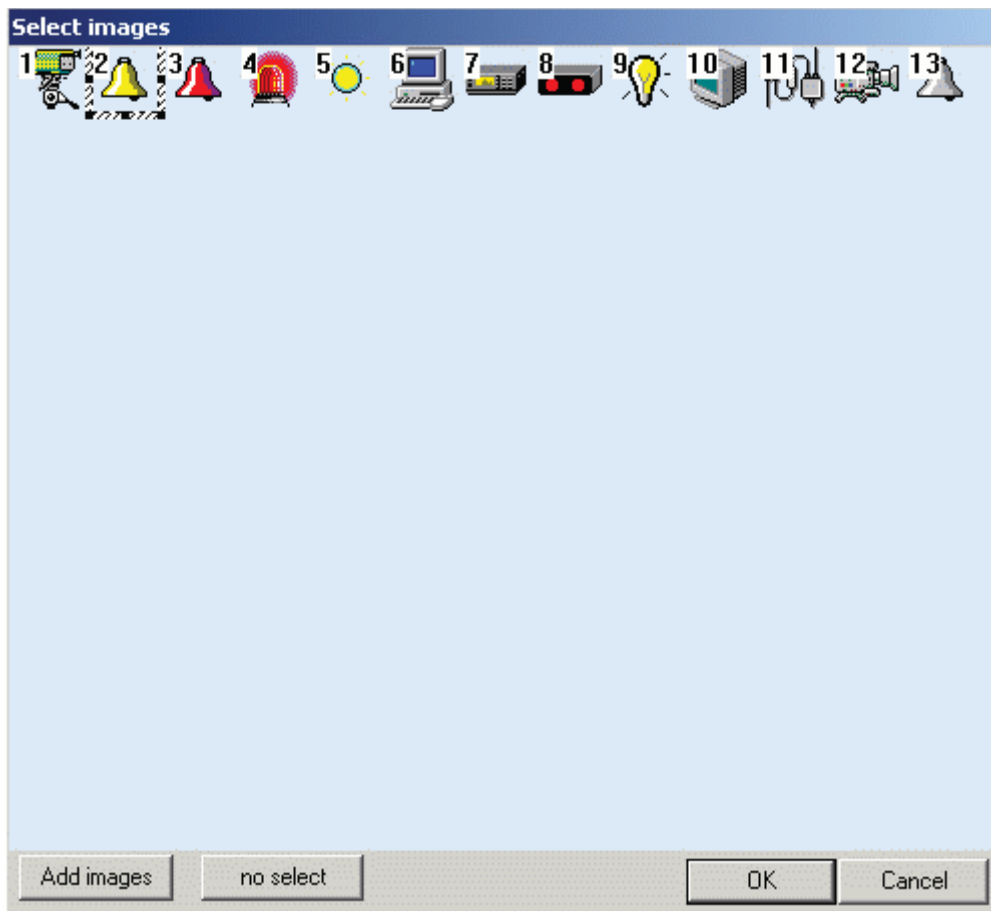
Steps are as follows:

1. Select "drawing image" from "[Tools bar of Drawing map](#)";
2. Select start point, left click your mouse;
3. Move the mouse to end point, then release the button;
4. A window shown below will pop out:



<Graph 1>

5. Select image for the each category shown above:



<Graph 2>

6. Users could add additional images by selecting 'Add images';
7. Click 'OK' to finish.

Changing parameters:

1. Select "select object" from "[Tools bar of Drawing map](#)";
2. Click the image you want to edit, a border will be formed around the image;
3. Left click your mouse to drag the image;
4. Right click your mouse to pop out the menu. Select "Draw object property", a window will pop out.

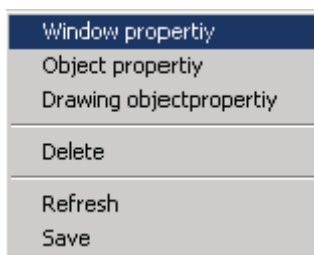
Note:

1. Each e-map will save its icons and bitmaps into its own library. So, a library will be generated each time the e-map is generated;
2. Each e-map will can operate on different computers.

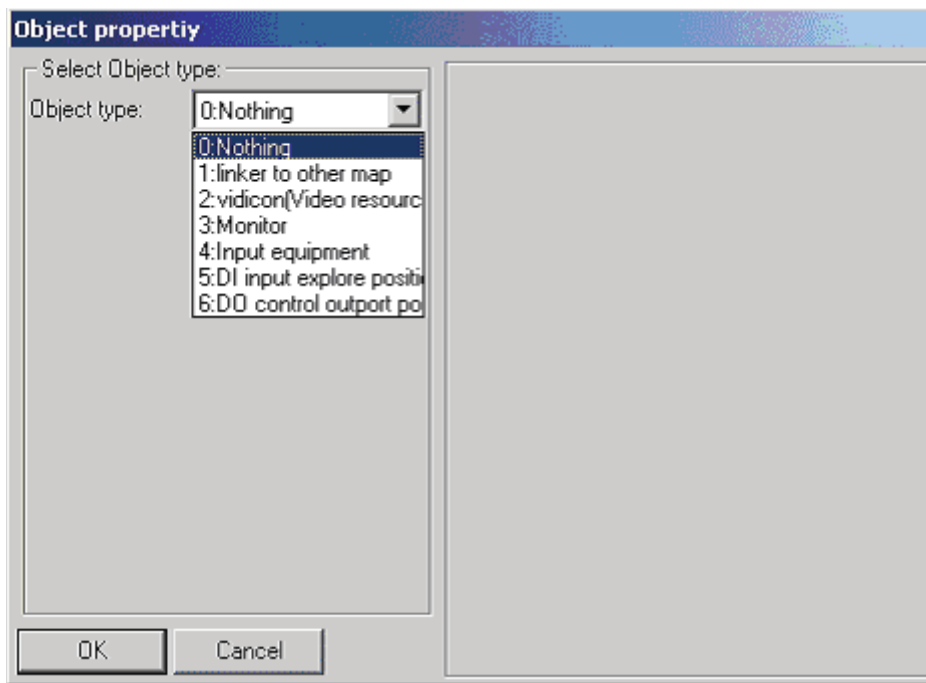
Object correlate with attribute

After selecting an object, you can set its attribute with real object as follows:

Right click your mouse on the designing map window, the menu shown below will pop out:



Select "Object property" to set its attribute, graph shown below:



There 7 types of settings:

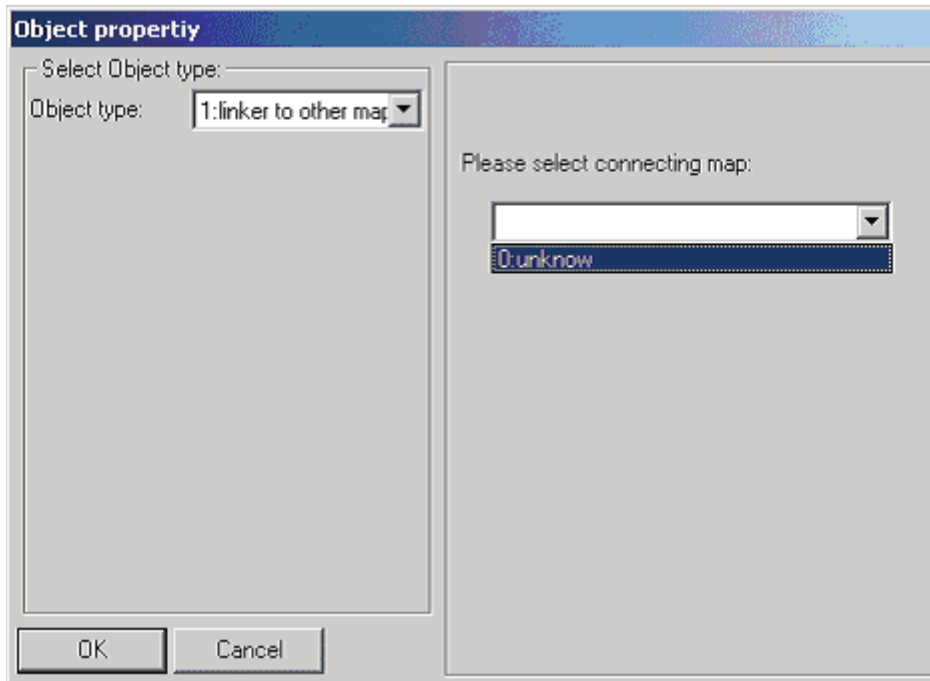
0. [Nothing](#)
1. [Linker](#) to other map
2. [Vidicon](#) (Video Resource)
3. [Monitor](#)
4. [Input equipment](#)
5. DI input explore position
6. DO control output position

Set nothing

Select "0: nothing" to be ok

Set linker to other map

Select "1: Linker to other map", graph shown below:

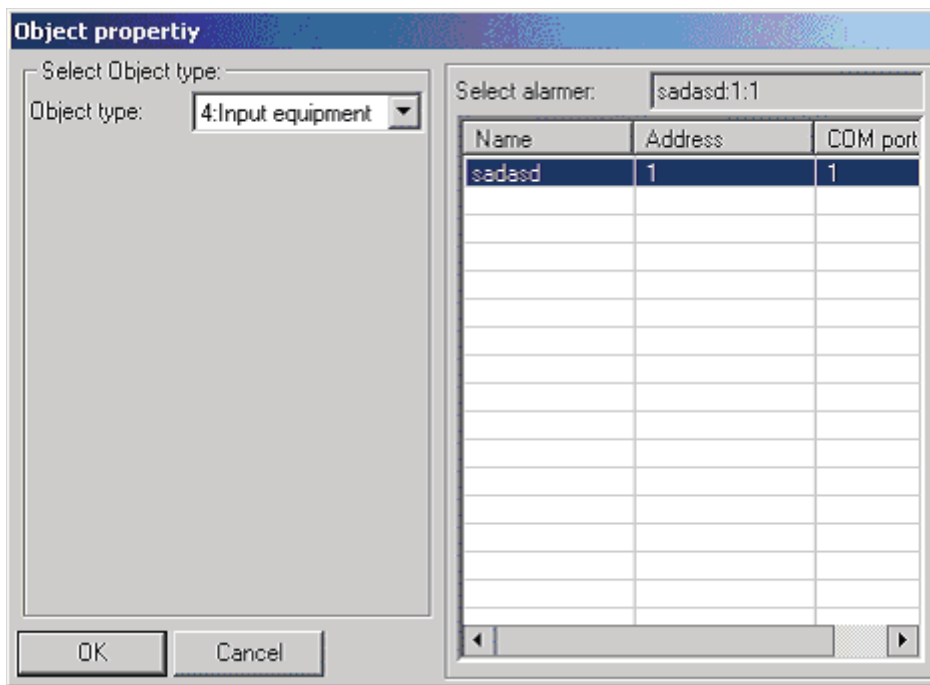


The purpose of setting linker to other map is to allow user to connect different e-maps at the same time.

ii

Set Vidicon (Video resource)

Select "2: vidicon", graph shown below:



This setting allows you to connect alarm equipment.

DI input explore position

Select "5: DI input explore position", graph shown below:

Object property

Select Object type:
Object type: 5:DI input explore p

Select alarmer: sadasd:1:1

| Name | Address | COM port |
|--------|---------|----------|
| sadasd | 1 | 1 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

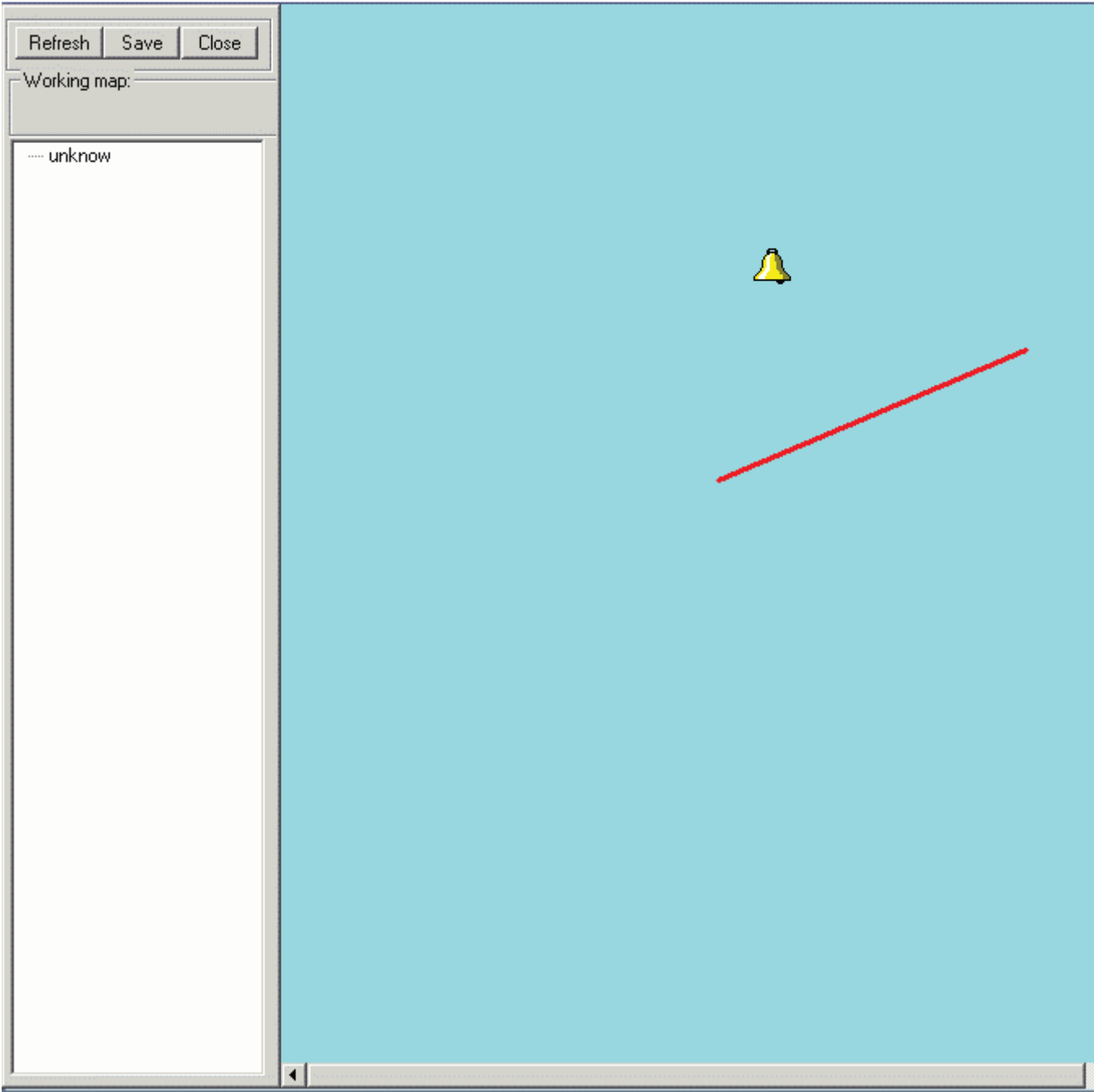
Select input: 1.q1

1.q1
2.q2
3.q3

OK Cancel

Set alarm Output

Select "6. Output",as follows graph:



Click "Operate Object", the window as follow:

I. Alarm controller

[illegible]

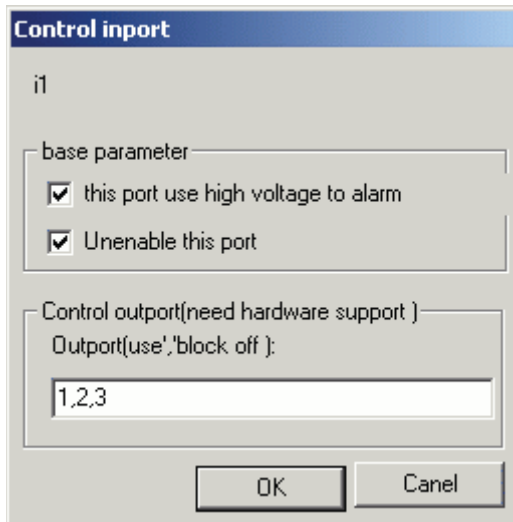
Explain:

1. The system will get current data to show window after 2-3 sec,data is showed on the right window

2. If the alarm controller don't work ,it will show the N0.3 icon
3. The window is used to control,it is same as [Set alarm controller to work or stop](#)

II. Alarm inport

As follows graph:



Explain:

1. If this port does not alarm,it shows with the No.1 icon,If it alarms it will show with the No.2 icon and flash. If it is invalid it will show with the No.3 icon.

II. Alarm outport

As follows graph:

Set output

Set output property

Work type: 1:Output alway

Putout voltage(0,1): 1

Delay 0 Sec

continuum 0 Sec

stop time in midway: 0 Sec

Number of plus cycle: 0 Sec

Set

Control output

Putout Reset

OK

Setting and control alarm controller

As follows chart:

[illegible]

You can set Parameter of each output,As follows chart:

Set output

Set output property

Work type:

Putout voltage(0,1):

Delay Sec

continuum Sec

stop time in midway: Sec

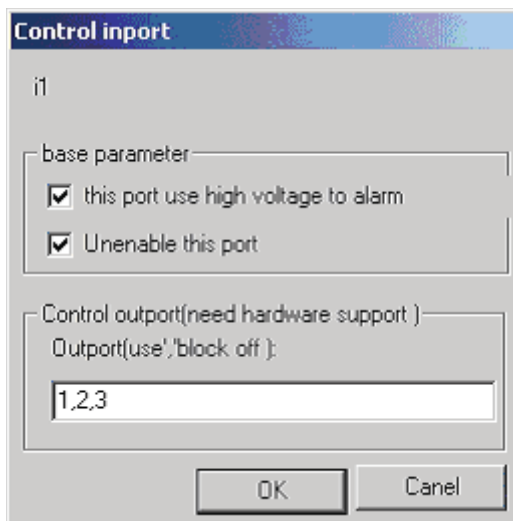
Number of plus cycle: Sec

Control output

This windows is setting output,if you select "Setting Inport",then as follows chart:


[illegible]

You can set Parameter of each inport,as follows chart:




Snapshot Introduction

There have two methods to make a snapshot:

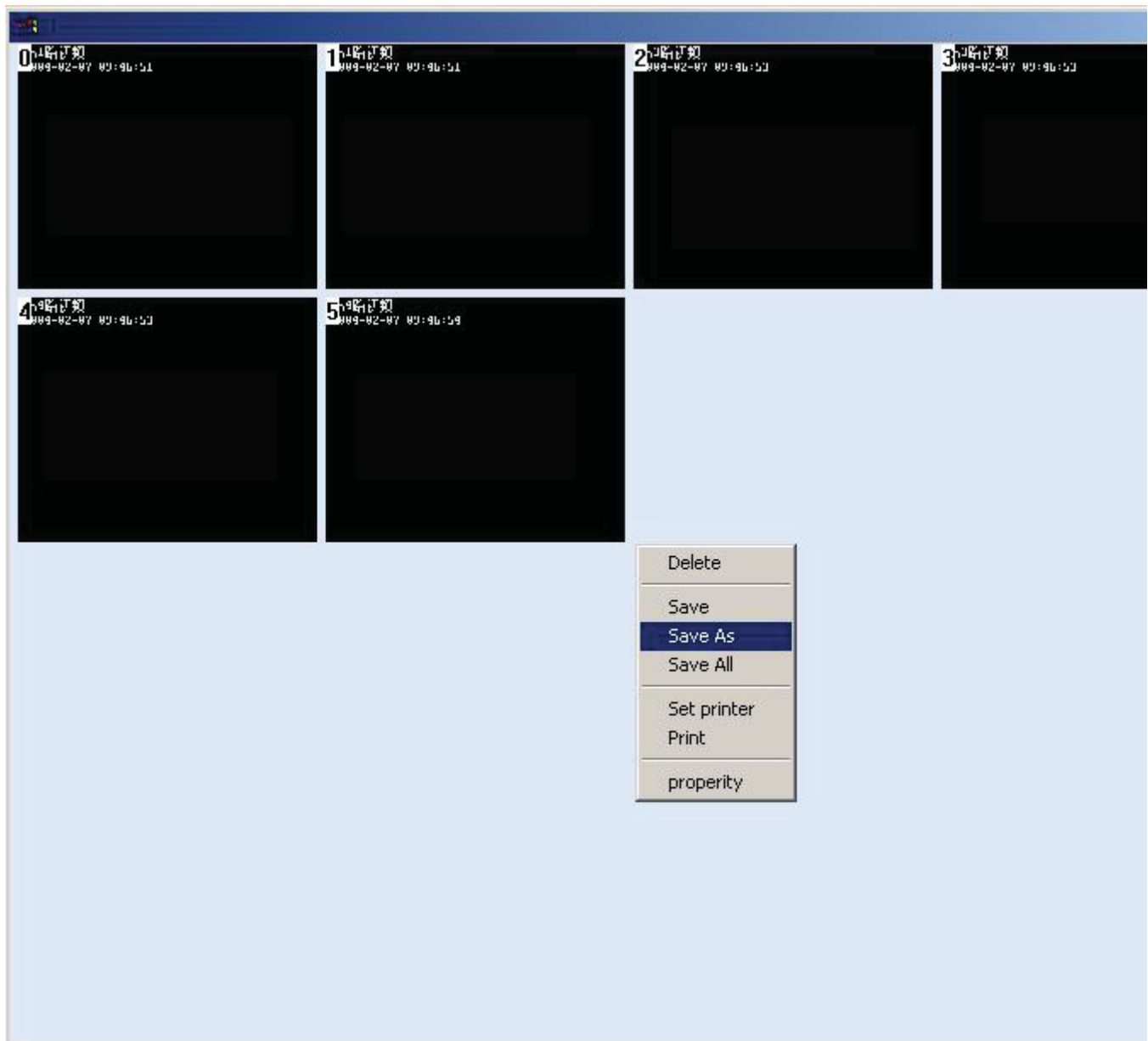
1.  Use "Snapshot" button:
 1. Select the channel that you want to snap;
 2. Left click the "Snapshot" button.
2. Use "F2" shortcut key:
 1. Select the channel that you want to snap;
 2. Press "F2" to make a snapshot.

After you make snapshot ,the images saved in the memory ,you have 3 methods to save them to the harddisk :

1. Use "Save image" button :
 1.  Right click "Snapshot" button to pop-up the image editing window.
2. Use "F3" shortcut key :
 1. Press "F3" to pop-up the image editing window.
3. Auto pop-up the image editing window :
 1. The pop-up the image editing window will pop-up after 8 seconds since your last

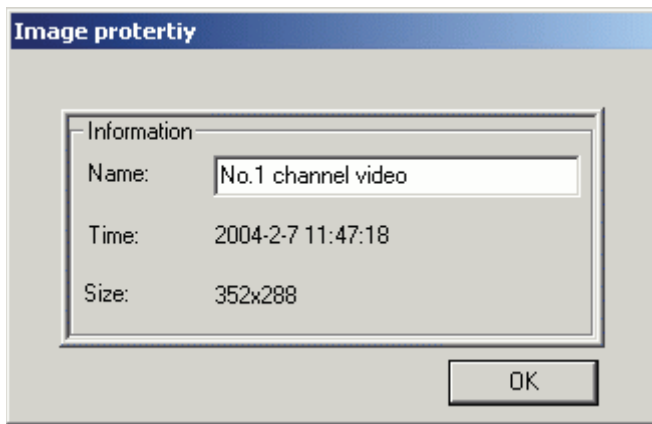
snapshot.

Image editing window shown below:



You can right click the property button to show the image detail informations :

You can change any name you like instead of the "No.X Channel video" to save the snapshot file name.



ii

Select "save file" or "save all"

1. The default folder of snapshots is : c:\CXRecord\Images;
2. The naming method of snapshot file is:
Date_Time_ChannelName_SnapshotNumber.bmp For example: 12/23/2003 11:20:45
first snapshot on channel 3. The file name will be : 2005-12-23-11-20-
45_Channel3_0.bmp

Introduction of playback

Click the  button to playback ,Graph shown below:



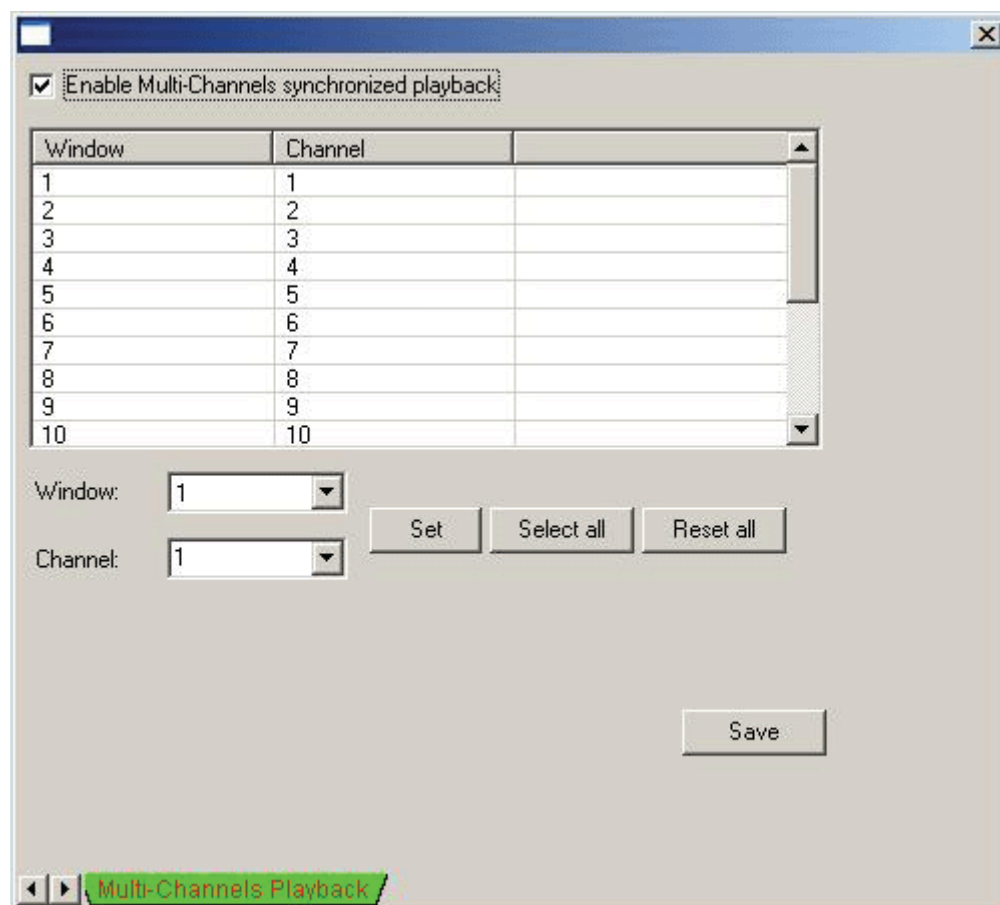
Depend on your access level, user only can playback enabled channel(s). Select any file you want to playback in the file list, double click to play.

or click the "Play" button to play.

After the video finished, the system will auto play next file in the file list.

Double click the video to enlarge or restore .

Multi-channel play setting:

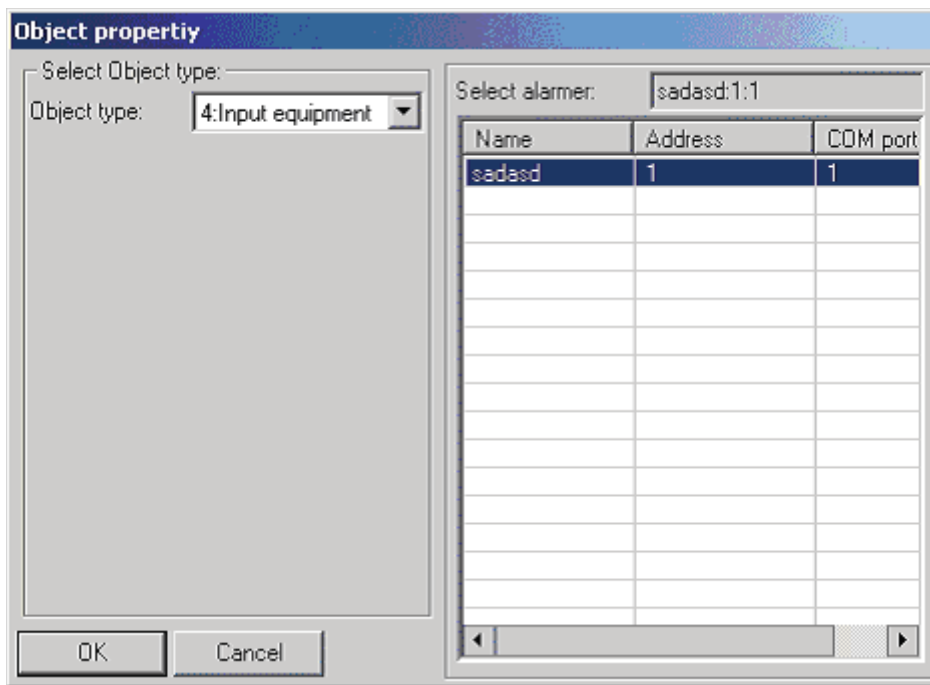


The screenshot shows a software window titled "Multi-Channels Playback" with a close button in the top right corner. At the top, there is a checked checkbox labeled "Enable Multi-Channels synchronized playback". Below this is a table with three columns: "Window", "Channel", and an empty column. The table contains 10 rows, numbered 1 to 10. Below the table, there are two dropdown menus labeled "Window:" and "Channel:", both currently set to "1". To the right of these dropdowns are three buttons: "Set", "Select all", and "Reset all". At the bottom right of the window is a "Save" button. At the bottom left, there are navigation arrows and a tab labeled "Multi-Channels Playback".

| Window | Channel | |
|--------|---------|--|
| 1 | 1 | |
| 2 | 2 | |
| 3 | 3 | |
| 4 | 4 | |
| 5 | 5 | |
| 6 | 6 | |
| 7 | 7 | |
| 8 | 8 | |
| 9 | 9 | |
| 10 | 10 | |

Window: Channel:

Multi-Channels Playback



This setting allows you to connect alarm equipment.

DI input explore position

Select "5: DI input explore position", graph shown below:

Object property

Select Object type:
Object type: 5:DI input explore p

Select alarmer: sadasd:1:1

| Name | Address | COM port |
|--------|---------|----------|
| sadasd | 1 | 1 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Select input: 1.q1

- 1.q1
- 2.q2
- 3.q3


OK Cancel

Set alarm Output

Select "6. Output",as follows graph:

[illegible]

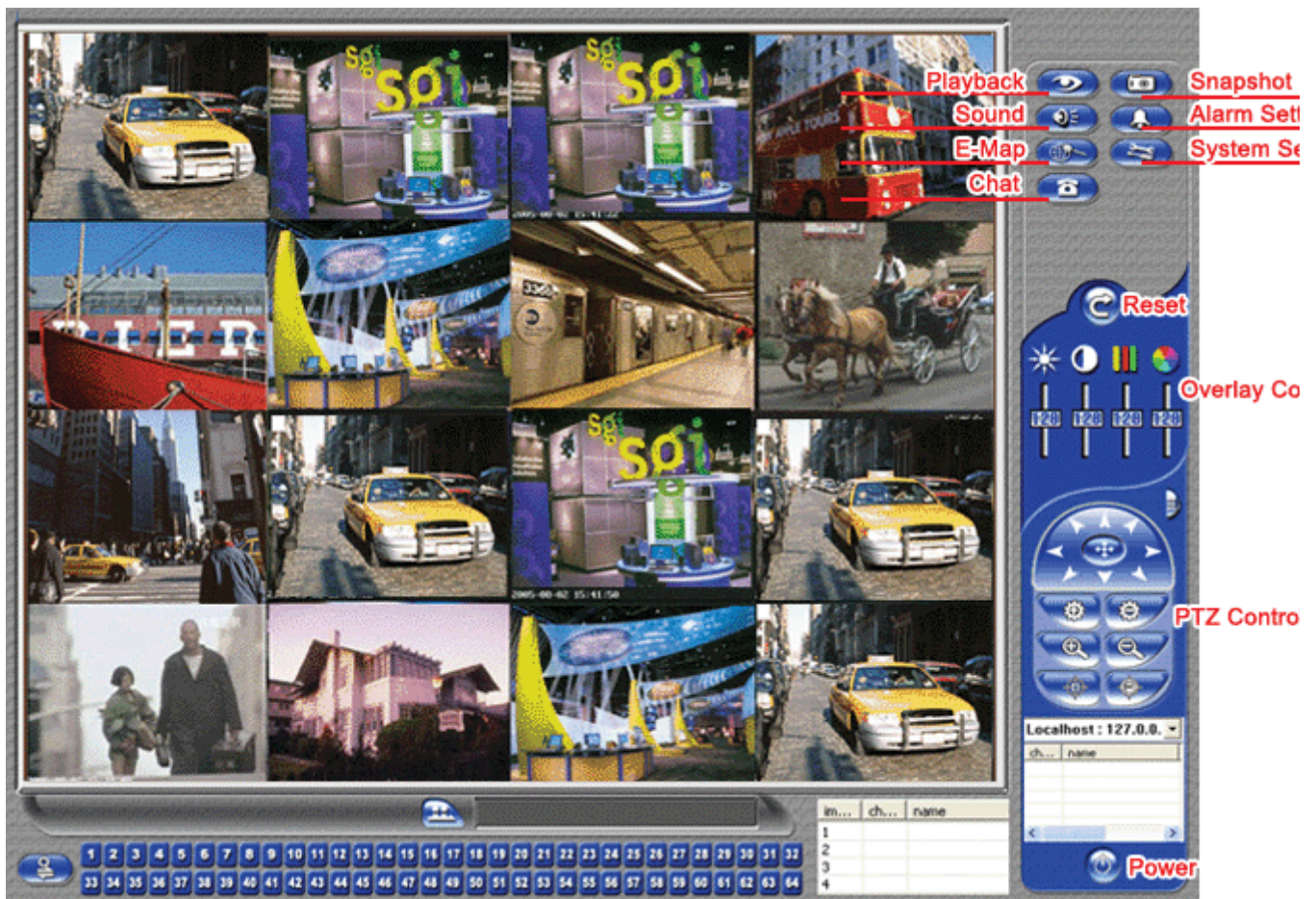
Introduction of Client software

Double click the  Net Monitor button to run the client software , login window will pop-up:

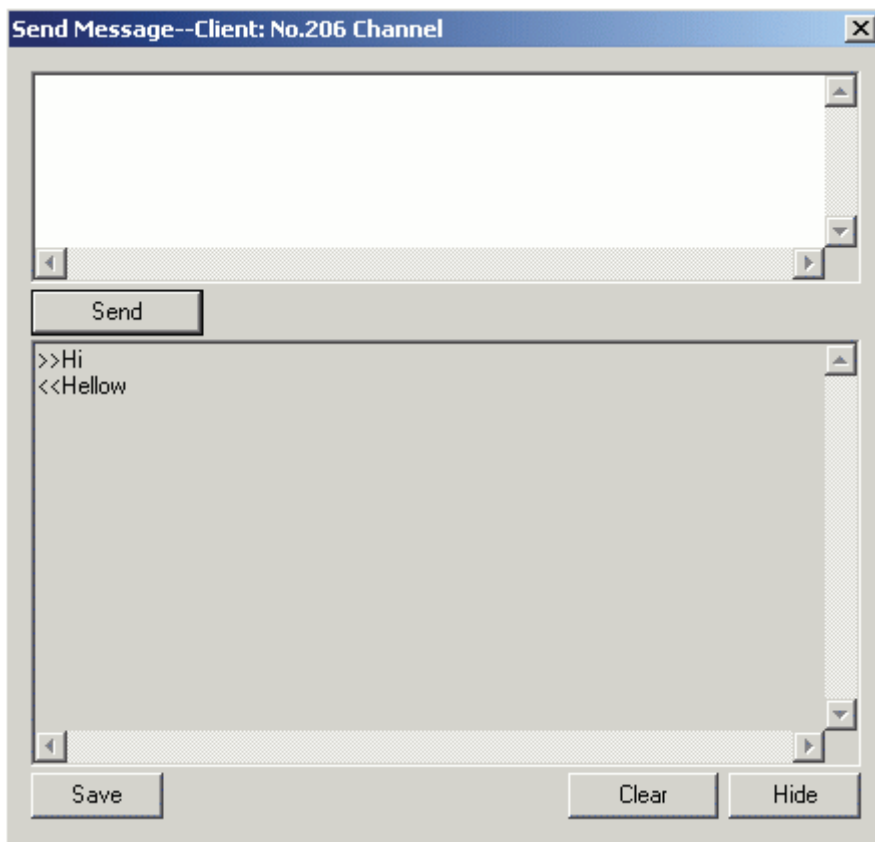


The default password of client software is "system" ,you can change password in "set password" in "system settings".

After login , the system will download informations from the server and test the network connection , interface shown below :



Chat £°Click the "Chat" button to chat with server, graph shown below:



Snapshot : Left click to capture image, right click to edit the captured image. you can press key "F2" to capture image too. The pop-up the image editing window will pop-up after 8 seconds since your last snapshot.

Next: Switch slideshow channels.

System settings: graph shown below:

Base information

| No. | IP | Name | User |
|-----|--------------|-------|--------|
| 1 | 192.168.1.10 | macro | system |
| 2 | 192.168.1.11 | zh | system |
| 3 | | | |

Use Images Number
 Number: 20

☒ Recieve sensor alarm signal
☒ Recieve motion detect signal
☐ Auto connect host when selecting host

☐ Use decode card to TV out
☐ NO show images on PC
☐ Display use decode card
☐ Receive commnad,port: 6601

Set Password ☐ Don't check password when login Set

Server IP or name: Enter Server IP address or Server's name. Max 64 characters .If you want to use lan Server to test ,please input your server's IP addres or the Server name, default server IP is 127.0.0.1

User name and password: The user account was established in the server.

Use Image Number: You can display 1,4,6,9,12,16 channels , more channels displayed higher CPU and RAM required. Recommended P4 2.4GHZ and 512MB to display 12 channels.

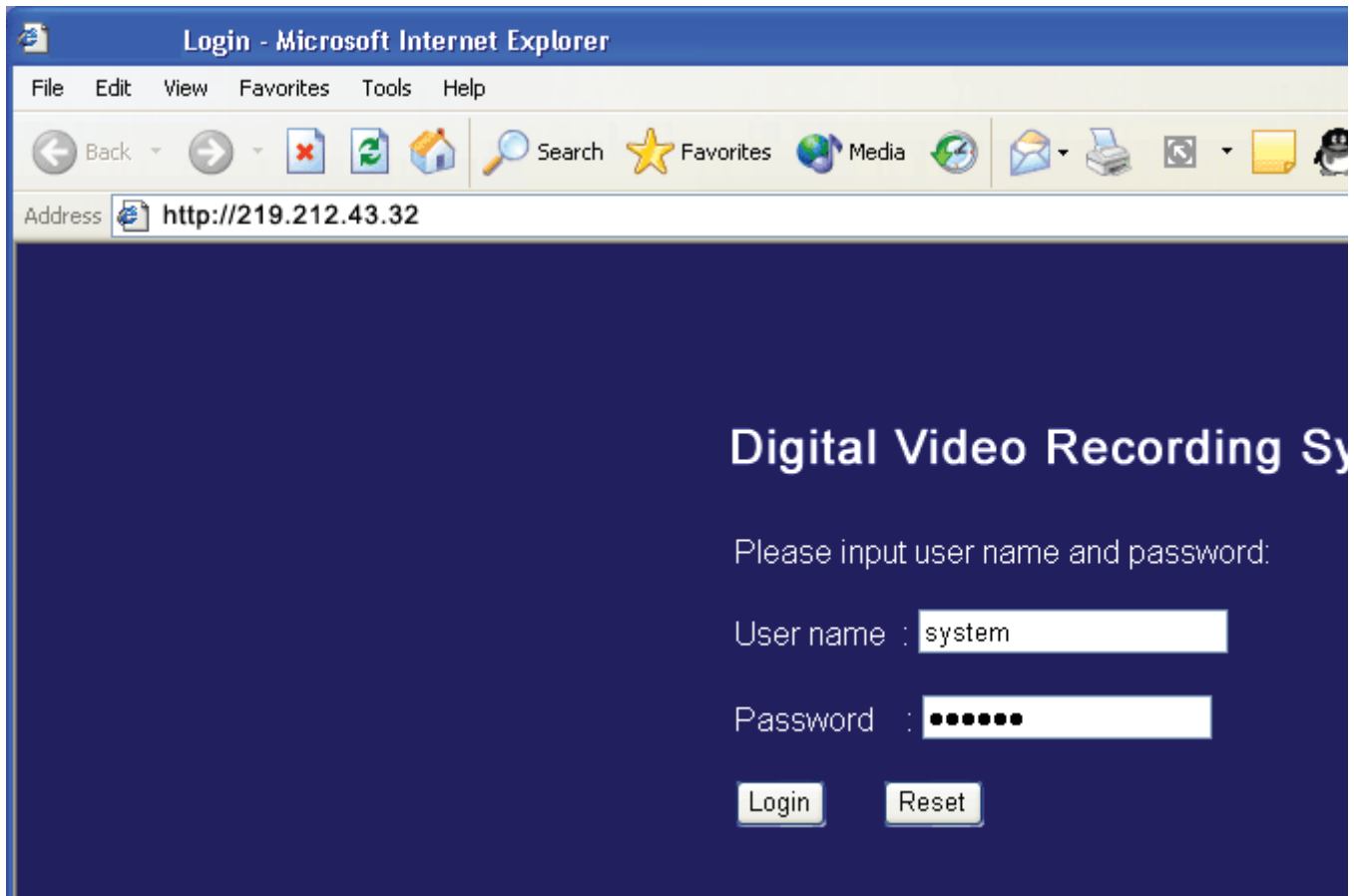
Slideshow controls: Check auto switch to enable slideshow.

Set password: Change login password.

IE Browser

* Note: Before use IE, Please take reference at Chapter 3.2 .

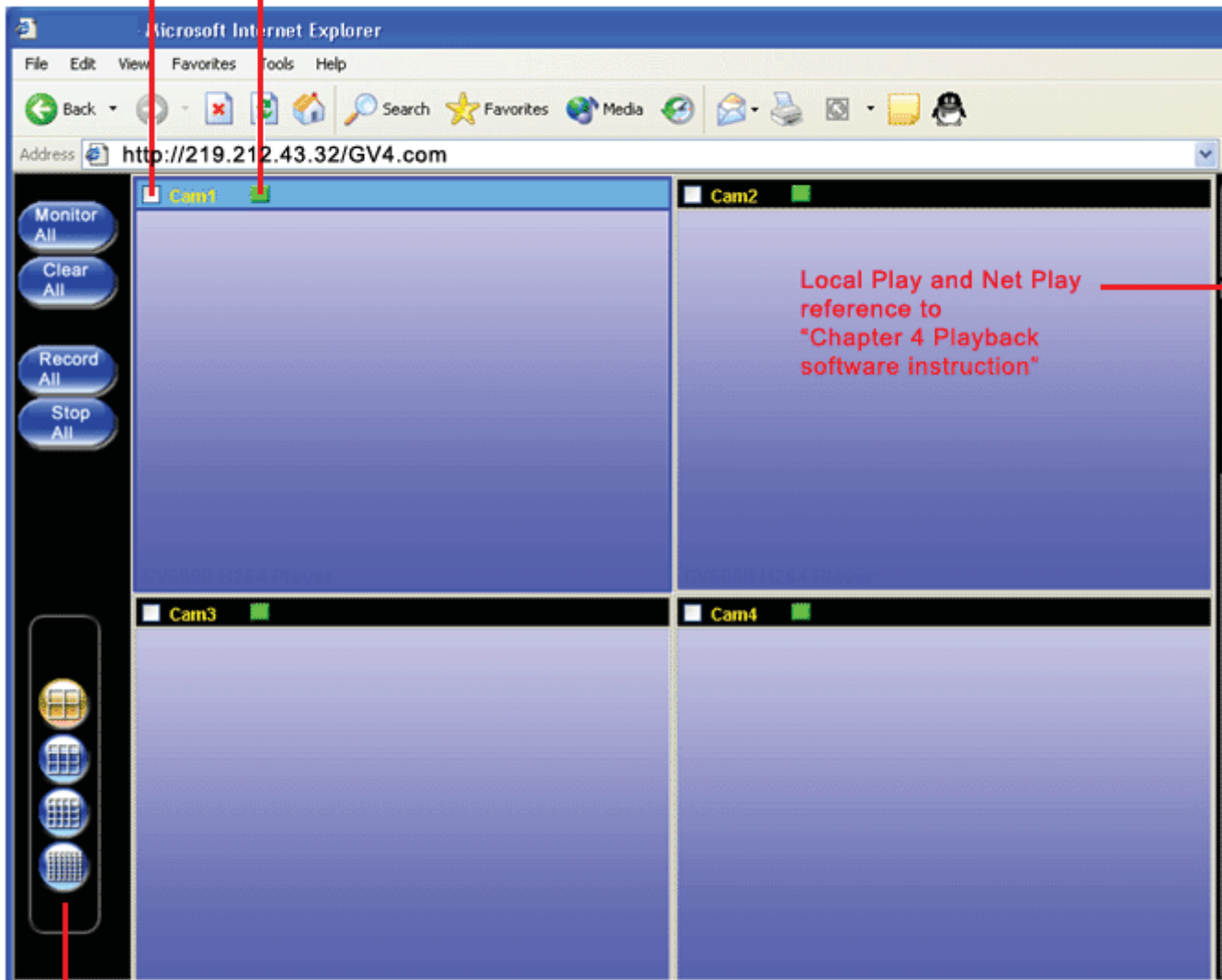
1. Enter the IP of the Server in the IE browser



2、 Enter user name and password, click "Login"

Monitor the channel

the channel start record



select windows number

Chapter 6 Backup Recorded videos

Recorded videos can backup to different medias very easily. The build in backup function can support CD , DVD ,and Harddisk,

For other storage medias, you need to manual backup.

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These contents included as follows:

1. Recorded files path
2. The structure of recorded files
3. The structure of backup.

I. Recorded files path

For the system stability, windows system partition will not use to store the recorded files.

The software will automatic establish a record folder everyday, started from D:

The naming method will be Harddrive:\Year_month_day

For example: On October 25 2005 , the software will establish D:\2005_10_25

The naming method of recorded files will be : ChannelNumber_Date_Time.GV4

For example: 12/23/2003 11:20:45 recorded on channel 3.

The file name will be : D:\2005_12_23\3_2005_12_23_11_20_45.GV4

II. The structure of recorded files

The software will create:

1. Index file: idx file, the file is binary system file. It recorded all basic information, such as channel name...It will place on index folder and recorded files folder.
2. Recorded files. All recorded files' extension will be .GV4.

III. The structure of backup.

For the convenient, user must copy 3 kinds of file in every backup.

1. Index files: Exist in record folder.
2. Recorded files: Exist in record folder.
3. Playback software: CXPlay.exe Located on C:\CXRecord6\